Flight Plan to Recovery

Preparing Airports for the Return of the Traveling Public

May 28, 2020
Washington, D.C.
Flight Plan to Recovery
Preparing Airports for the Return of the Flying Public

Proceedings of an ACRP Insight Event

Theresa H. Schatz
Transportation Research Board
*Rapporteur*

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Preface

“Flight Plan to Recovery: Preparing Airport Business Partners for the Return of the Flying Public” was held on May 28, 2020, from 1:00 p.m. to 5:00 p.m. via a Zoom webinar. The Transportation Research Board’s (TRB’s) Airport Cooperative Research Program (ACRP) organized the webinar as part of its series of convening activities, “ACRP Insight Events.” This event focused on convening a quick response to the ongoing operational and economic impact of the COVID-19 pandemic in the airport industry and methods to get the confidence of the traveling public back. The event featured speakers from airports and their business partners in the airport ecosystem, including airlines, concessionaires, ground transportation providers, and governmental organizations such as the Federal Aviation Administration (FAA) and the Transportation Security Agency (TSA).

The event led off with an opening and welcome remarks, followed by the FAA overview, a health update, and an industry overture. These remarks were followed by airport case studies and best practices; airline highlights; and a look at other stakeholders, including concessionaires, ground transportation providers, and a governmental agency. The event ended with a Q&A and a wrap-up.

These proceedings were prepared by Theresia Schatz, Senior Program Officer with the Transportation Research Board, Airport Cooperative Research Program, who served as the rapporteur. They are a compilation of the presentation and a factual summary of the ensuing discussions at the Insight Event. The planning committee was responsible for constructing the agenda and identifying and obtaining speakers for the event. The views contained in these proceedings are those of the individual ACRP Insight Event participants and do not necessarily represent the views of all participants; the planning committee; TRB; or the National Academies of Sciences, Engineering, and Medicine.

This document was reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the National Academies’ Report Review Committee. The purposes of this independent review are to provide candid and critical comments that will assist the institution in making the published proceedings as sound as possible and to ensure that the document meets institutional requirements for clarity, objectivity, and responsiveness to the project charge. The review comments and draft manuscript remain confidential to protect the integrity of the process.

TRB thanks the following individuals for their review of the summary: Ellen McClain, InterVISTAS, Washington, D.C.; Bob Montgomery, Southwest Airlines, Dallas, Texas; and Ryan Murphy, Program Officer with the Division on Engineering and Physical Sciences, National Academies of Sciences, Engineering, and Medicine, Washington, D.C. Although the reviewers listed above provided many constructive comments and suggestions, they did not see the final draft of the symposium summary before its release. The review of this
summary was overseen by Chris Hendrickson of Carnegie Mellon University and Chair, TRB Division Committee. Appointed by the National Research Council, he was responsible for making certain that an independent examination of these proceedings was performed in accordance with established procedures and that all review comments were carefully considered. Responsibility for the final content of this summary rests entirely with the author and the institution.

Events affecting air travel as it relates to COVID-19 are fluid and are changing often. Some information presented at this webinar Insight Event may be out of date at the time of publication. Readers are encouraged to keep in mind that the information was presented at the end of May 2020.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AAAE</td>
<td>American Association of Airport Executives</td>
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<td>ACRP</td>
<td>Airport Cooperative Research Program</td>
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<td>ACI</td>
<td>Airports Council International</td>
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<td>AMAC</td>
<td>Airport Minority Advisory Council</td>
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<td>AOC</td>
<td>Airport Cooperative Research Program Oversight Committee</td>
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<tr>
<td>CARES</td>
<td>Coronavirus Aid Relief and Economic Security</td>
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<tr>
<td>CAT</td>
<td>Credential authentication technology</td>
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<td>CBP</td>
<td>Customs and Border Protection</td>
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<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>COVID-19</td>
<td>Coronavirus disease</td>
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<td>FAA</td>
<td>Federal Aviation Administration</td>
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<td>FDA</td>
<td>Food and Drug Administration</td>
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<tr>
<td>HEPA</td>
<td>High-efficiency particulate air</td>
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<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
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<td>LAX</td>
<td>Los Angeles International Airport</td>
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<tr>
<td>PPE</td>
<td>Personal protective equipment</td>
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<tr>
<td>PPP</td>
<td>Paycheck Protection Program</td>
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<tr>
<td>QR</td>
<td>Quick Response code</td>
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<tr>
<td>RFID</td>
<td>Radio frequency identification</td>
</tr>
<tr>
<td>SEA</td>
<td>Seattle-Tacoma International Airport</td>
</tr>
<tr>
<td>TDC</td>
<td>Ticket document checker</td>
</tr>
<tr>
<td>TNC</td>
<td>Transportation network company</td>
</tr>
<tr>
<td>TPA</td>
<td>Tampa International Airport</td>
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<td>TRB</td>
<td>Transportation Research Board</td>
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<tr>
<td>TSA</td>
<td>Transportation Security Agency</td>
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<tr>
<td>U.S. DOT</td>
<td>U.S. Department of Transportation</td>
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<tr>
<td>212(f)</td>
<td>A presidential proclamation: 212(f) of the Immigration and Nationality Act (8 U.S.C. §1182(f))</td>
</tr>
<tr>
<td>501(c)(6)</td>
<td>Internal Revenue code designation for nonprofits such as business leagues, chambers of commerce, real estate boards, boards of trade, etc.</td>
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“Flight Plan to Recovery: Preparing Airports and Their Business Partners for the Return of the Flying Public” was organized by the Transportation Research Board’s (TRB’s) Airport Cooperative Research Program (ACRP) as part of its series of convening activities, “ACRP Insight Events.” This event focused on the ongoing COVID-19 pandemic response and its impact on airports operational and economic recovery. Presentations from airport industry leaders in the airport ecosystem identified and discussed current and ongoing practices to get passenger confidence back to aid in airport recovery. Specific topics presented the aviation industry with challenges that are mutually shared by all partners, including safety, public confidence, and financial sustainability. Other topics included gaps in the industry and public response to date and how the industry may address them, as well as operational mitigation strategies to enable recovery in the post-lockdown environment.

“Flight Plan to Recovery: Preparing Airports and Their Business Partners for the Return of the Flying Public” took place as a Zoom webinar on May 28, 2020, from 1:00 p.m. to 5:00 p.m. Nearly 1,000 people registered for the event, which had a global audience with a wide range of interested disciplines that included airports, airlines, consultants, academicians, and local and regional government, among others. The program agenda for the event is provided in Appendix A, and the speaker biographies are in Appendix B. The results of a survey distributed to attendees after the event are in Appendix C, and a list of attendees is in Appendix D. Presentations and recordings of the event are posted on the ACRP Insight Event web page, http://www.trb.org/ACRP/ACRP-Insight-Event-COVID19.aspx. Readers who are interested in more information can e-mail the ACRP Senior Program Officer for the event, Theresia Schatz, at tschatz@nas.edu.

The event opened with introductory and welcome remarks, followed by an overview by Winsome Lenfert, Deputy Associate Administrator for Airports with the Federal Aviation Administration (FAA), and a health update, which included information on the safety of travel during the ongoing COVID-19 pandemic and another presentation on passenger risk, confidence, and behavior. These remarks were followed by an industry overture on what is the new normal to ensure the health and safety of travelers. Next, airport case studies and best practices were presented and the challenges were discussed. Then an update from representatives of multiple airport tenants was presented. The update included airline highlights of current and future plans to adapt and adjust in a COVID-19 environment as well as a look at other stakeholders representing concessionaires, ground transportation providers, and a governmental agency. An overall question-and-answer session was then held. The program ended with a brief wrap-up.

ACRP is an industry-driven, applied research program that develops near-term, practical solutions to problems faced by airport operators. ACRP is managed by TRB, a part of the National Academies of Sciences, Engineering, and Medicine, and is sponsored by FAA.
ACRP Insight Events are forums that foster dialogue between professionals across sectors, institutions, and industries. ACRP Insight Events convene airport industry leaders and subject matter experts in various fields to encourage discussion and promote broader and deeper insight on topics of significance to airport operators. These in-depth, face-to-face gatherings are designed to promote communication and collaboration, foster innovation, and help identify areas of future interest and research, especially for topics of emerging importance.
Opening Remarks and Welcome

Neil Pedersen, *Transportation Research Board*
Rhonda Hamm-Niebruegge, *St. Louis International Airport, and Chair, ACRP Oversight Committee*

Introductory remarks were made by Neil Pedersen, Executive Director, TRB, welcoming all to the webinar and stating how the airline industry and its business partners have been hit hard during the COVID-19 pandemic. Pedersen cited statistics of Transportation Security Agency (TSA) checkpoint numbers down 96% in mid-April and still down 84% as of mid-May. He continued that U.S. domestic commercial flights were down 68% and international flights were down 91%. Pedersen added that the airline industry and its business partners depend on regaining the confidence of air travelers that it is safe to use the nation’s airports. He stated that the efforts of the planning committee for this Insight Event with ACRP staff assembled an impressive list of speakers that represent many stakeholders in the airport ecosystem. Thus, they will be able to speak about the challenges in the airport industry that are mutually shared by all partners, including public safety as well as how best to address travelers emotions. Discussions will also include cost cutting and other measures to achieve greater financial stability in various areas of the speakers’ businesses as well as gaps in industry and operational mitigation strategies to enable recovery in the post-lockdown environment.

Neil Pedersen thanked TRB’s sponsor, Winsome Lenfert of FAA; the members of the ACRP Oversight Committee (AOC); the members of the planning committee; the ACRP staff; and the TRB conference management staff. In addition, he thanked the event moderator and AOC Chair, Rhonda Hamm-Niebruegge, and all of the event speakers who were willing to share their insights and information. Pedersen then introduced the event moderator, Rhonda Hamm-Niebruegge, Airport Director, St. Louis International Airport, and Chair, ACRP Oversight Committee.

Rhonda Hamm-Niebruegge began by citing the nearly 1,000 people who had registered for the event, noting that this number represented the urgency and importance of the topics that would be discussed. She provided context about what she hears from leaders in the airport community, asking “What are the airports doing to try and bring the customers back and instill a level of confidence?” She added that these were very hard questions and that, while everyone was trying to manage through, this webinar was an opportunity for people to hear what the industry in total is doing. Hamm-Niebruegge provided an overview of the speakers, starting with the presenters for the health update, to explain what COVID-19 is, its challenges, and all aspects of aviation that have been affected. These range from the airlines to the airport, to the concessionaires, to ground transportation, and to all entities that rely so heavily on aviation for their day-to-day business. She stated that, “at the end of this, you will see that there is a unified approach and people are working very hard to know what each other is doing so that we can come out of this stronger than before.”
Hamm-Niebruegge added that 2019 was probably one of the strongest years on record for aviation from a passenger, revenue, and safety perspective. The beginning of 2020 started the same way, with record numbers in January and February as compared with the previous year. Then, in March, everything turned upside down. The aviation industry is one that is quick to react and continue its recovery. She emphasized that “today you will hear how those challenges are being addressed and about the creative ways our industry partners are addressing the challenges and trying to install confidence in the consumers, so as to see passenger numbers return to 2019 levels.”
Rhonda Hamm-Niebruegge, St. Louis International Airport and Chair, ACRP Oversight Committee, Moderator
Winsome Lenfert, Federal Aviation Administration, U.S. Department of Transportation, Presenter

Rhonda Hamm-Niebruegge introduced FAA Deputy Associate Administrator for Airports Winsome Lenfert, whose office has responsibility for certain programs related to airport safety and inspections and standards for airport design, construction, and operations, including international harmonization of their airport standards. The office is also responsible for national airport planning as well as environmental and social requirements. FAA and the U.S. Department of Transportation (U.S. DOT) have been working to unite the industry. Both have emphasized the need to work together to deal with a significant downturn in passenger traffic and have highlighted efforts for recovery with all industry partners and efforts for the health, safety, and security of both employees and the traveling public. The importance of flexibility is essential, as is a focus on recovery and continued growth.

Lenfert began by citing the need for this Insight Event and stating that she had quickly come to an agreement with the AOC that the need for this event was urgent and that she was thankful to ACRP for getting this event done so quickly with the wealth of presenters. Lenfert indicated that the U.S. DOT, FAA, and many others, are all working very hard to manage through this global health and public health emergency. She said that, since early 2020, FAA has been working on a presidential proclamation known as “212(f)” to limit flights from China and Europe and, now, Brazil and many other locations in between. She added that the decline in passenger traffic showed the need to work together to find safe places to park thousands of aircraft across the U.S. system.

Lenfert said,

At our lowest point in the United States, we saw aircraft operations down by 67% from this point last year and passenger traffic was down 96%. The global impact is also remarkable in that there has been a global reduction of 28.4% in the first quarter of 2020, which translates to roughly about 614 million passengers. Long-term projections show that international reductions will be down by 50% throughout 2020. . . . These numbers are staggering and they are just one piece of the overall impact to the aviation industry that sees empty terminals every day.
She further stated that the industry needs to return its attention to recovery and consider how best to strengthen the public and passengers’ confidence in air travel. Then it will be possible to once again fill terminals and airplanes with business travelers and vacationers and begin to reengage these huge economic drivers of communities.

Lenfert stated that FAA and the U.S. DOT are working closely and relying heavily on other federal partners at the Department of Health and Human Services and the Department of Homeland Security, especially with TSA and the Centers for Disease Control and Prevention (CDC), to provide guidance on health and security.

Lenfert indicated that FAA is also working closely with the International Civil Aviation Organization (ICAO) and other international partners to consistently provide information to the aviation industry across the world. She stated that they are working with other stakeholders to gather input and, especially in events like this, on how best to bring the aviation system back up. She said, “Some key points to consider are, first and foremost, how can people be protected? How do we protect our passengers, our crew or aviation workers, or anyone who comes through our system on a daily basis to make sure that we work as one aviation industry?”

Lenfert added that we need to make sure that we are keeping our entire system up and operating through this whole process. It is important that, for points of essential connectivity, especially in remote areas where aviation is the only connection to receiving vital supplies, we ensure what we have done so far.

Lenfert continued that the system that we work in today is very complex. Therefore, it is essential to make sure that health and security changes are integrated as a system and also that the implementation of these changes is flexible enough to respond to an ever-evolving situation. She went on to say that one of the lessons learned since the beginning of this pandemic is to be flexible.

Lenfert urged participants to build on lessons learned and to continue to build public confidence in existing systems. She added that there are financial relief strategies to help the aviation industry and that the Coronavirus Aid, Relief, and Economic Security (CARES) Act was a great start. It helped many airports and airlines, but, she added, there is more to do to ensure that the aviation industry is healthy. She said, “We are working together to restart the aviation industry and support its recovery, which are actually two very distinct actions: restart and recovery. This will require different approaches and temporary measures to mitigate the risks.” Lenfert added that the webinar’s discussion would focus on restarting recovery and continuing growth.
Rhonda Hamm-Niebruegge, St. Louis International Airport and Chair, ACRP Oversight Committee, Moderator

**Presenters**

Hilary Godwin, *University of Washington School of Public Health*
Baruch Fischhoff, *Carnegie Mellon University*

**Rhonda Hamm-Niebruegge** introduced Session 2, a health update by Hilary Godwin, Dean of the University of Washington School of Public Health, who presented on health, safety, and travel during the ongoing COVID-19 pandemic, and Baruch Fischhoff, Howard Heinz University Professor in the Department of Engineering and Public Policy and Institute for Politics and Strategy at the Carnegie Mellon University, who presented on passenger risk perception, confidence, and behavior.

**Hilary Godwin** presented an overview of COVID-19. There is a shortage of tests, reagents, supplies, and personal protective equipment (PPE) that poses risks and challenges to the population and health care workers. For workplace interventions, it is important to provide screening and maintain a clean environment. For air travel, it is important to maintain social distancing, both in airports and on aircraft, wear facial coverings, keep surfaces clean, and maintain good high-efficiency particulate air (HEPA) filtering systems. Protecting public health and safety is a state-level function, although federal guidance is sought. **Baruch Fischhoff** presented an overview of passenger risk perception. Behavioral science and the practice of risk communication are key areas to attend to, as many are facing stressful situations with misinformation on a new and unknown environment. It is important to have both process and content matter, show concern for people, and be collaborative and adaptive to keep up with changes in a virus.

**Health, Safety, and Travel during the COVID-19 Pandemic**

Hilary Godwin, *University of Washington School of Public Health*

Hilary Godwin stated her goal was to provide an overview of what is known about COVID-19 and how this pertains to the airline industry. She stated that it is important to remember that COVID-19 is a new virus, meaning that the majority of the population is still susceptible to infection, and that there currently is no vaccine for it. She stated that it is important to keep in mind that the typical timeline for producing a vaccine for a new disease is many years, and the world record at this point is 4 years. So even with speeding up production and discovery of a vaccine, it will be at least 12 to 18 months until a vaccine
is developed. She also stated that with any new disease, it takes a little while to develop tests for it, and this one is no exception.

Godwin went on to say that even now, when there are tests available, there are still shortages in terms of reagents and supplies and PPE that healthcare workers need to use when they are collecting samples from patients. This has posed a challenge to knowing who is currently infected and to the ability to help prevent the spread of the disease. She added that 80% of the population that gets infected with COVID-19 experiences either mild or moderate symptoms or no symptoms at all. She stated that it is really challenging that there are people walking around who are infected but are not so sick that they have to stay in bed. Then there is a significant percentage of the population that may not even know they have COVID-19. She said, “This really challenges our ability to identify those people who are infected and to use normal quarantine and isolation procedures to prevent spread.”

Godwin stated that, on the flip side, of the 80% who experience either mild or moderate symptoms when they are infected, 20% (which is a high percentage), experience more severe symptoms than someone infected with the seasonal flu and need intense hospitalization and care, often for many weeks. Such levels of hospitalizations have the potential to overload the healthcare system. She stated that was visible in New York City, but it was true of other places, including Seattle, Washington, where the curve was flattened significantly. Seattle and New York City also saw a huge impact on their healthcare systems and their ability to provide services for people with heart attacks and for car accident victims who needed immediate care. She added that people were still less likely to get their routine medical care from their physician and that their last resorts were to switch to community-level interventions.

She then indicated that the limitations of the tests were becoming more widespread and explained the two different kinds of tests. The first test is to see whether someone is currently infected and is only effective if the person has enough virus in his or her body to show up on the test. One of the challenging things about COVID-19 is the long lag time. However, for some people, there is a period between when they are exposed and when they start to exhibit symptoms or have a high viral load during which they could show up negative, even though they might end up testing positive a few days later. She added that this means the testing is really just a snapshot in time and does not give as much information as we would like.

Godwin further elaborated on the other kind of test, the antibody-based test, which is for people who have previously been infected. These tests also have inherent limitations. She explained that it takes a little while before a person’s immune system develops antibodies that can be detected through testing. Godwin stated that it could be a couple of weeks before someone tests positive, and that COVID-19 is really challenging because it is new. She said that doctors and researchers do not know whether or not a positive result on this test means that a person is protected from a future infection. This is a challenge inherent to COVID-19 that makes it really difficult for individuals to know what to do when the result of their antibody-based test is positive. It also makes it hard to make decisions about whether employee interventions could be done selectively. Godwin observed,
What we know right now about transmission of COVID-19 is that the highest risk is due to droplets from someone who is coughing or sneezing or speaking loudly, who has that large amount of virus in their body and those droplets can hang out in the air for about 6 feet. So being in close proximity—within 6 feet of someone who is infected for an extended period of time, which would be approximately 10 to 15 minutes or more—that is where we see the highest risk for infection. Keep in mind that that person may not even know that they’re infected.

Godwin stated that a lower risk, but one that is relevant to the airline industry and other workplaces, is that the droplets can also fall on surfaces, such as the person who had coffee in his or her hands, then touched a door knob, where the virus could be picked up. She added, “And if you touch your face, then you could become infected that way, but that’s the lower-risk event.” She added,

Of the measures that we know that reduce risk of transmission of COVID-19, the best one is to stay away from other people outside their household. People who are sick must stay home and in bed. But as we’ve seen with the virus, what people refer to as lockdowns or “stay-at-home, stay healthy,” we’ve encouraged people, even if they aren’t experiencing symptoms, to try and avoid close contact for prolonged periods of time with people who are outside their household... [I]f you do need to go outside your home and interact with people from outside your household, we ask that you try to stay 6 feet away from those people and wear a face covering, and that safe covering isn’t just to protect you, it’s mainly to protect other people, just in case you have COVID-19 and don’t know it.

Godwin noted that in terms of workplace interventions, it is really important to do screening to make sure employees are not coming to work if they have symptoms and to send them home if they do. Routine cleaning of high-touch surfaces and encouraging people to wash their hands regularly or use hand sanitizer to prevent them from getting infected via surfaces are also important.

Godwin stated that it is important to remember that there are individuals who are at higher risk for severe symptoms, and so it is important that people in those risk groups try to stay away from people who are outside their household and may have COVID-19. That includes people over the age of 65, people with prior heart and lung disease or diabetes, and those who are morbidly obese, which, she stated, is a significant segment of the U.S. population.

As this relates to air travel, Godwin explained that, as airports start to reopen with more passengers, it is important to put in constraints to maintain social distancing, both in the airports and on planes. She added that it is very important to require employees and travelers to wear face coverings, particularly because it is not possible to know whether people may have COVID-19 if they are asymptomatic. She emphasized that that all planes have HEPA filtration systems and frequent disinfecting of high-touch surfaces and access to hand sanitizers throughout airports and on planes. She further stated that it is important to thoroughly disinfect planes between flights and provide clear additional warnings for those high-risk individuals.
Godwin also stated that it is important to remember that under federalism in the United States, the power to protect the public health and safety is reserved to the state, so there are going to be a lot of different reactions on how to deal with COVID-19 as each governor and each state health department make their own decisions. She cited an example in Washington State about how people were aware and had clear guidance about when they could do different things, which is not true for every state. She explained that each state has different phases, guidelines, and metrics, so it can be very confusing once people start traveling across borders. Godwin stated that since there are critical roles for the federal government to play during this time, national guidance is needed, and it is important that the federal government manage the supply chain for essential items like test kits, face coverings, gloves, cleaning materials, and disinfectant materials with issue guidance for interstate and international travel. National standards are needed, and tools should be available for contact tracing and associated data collection and sharing. She added that it is important that such standards focus on issuing protections for the nation’s most vulnerable and that it is important there is fiscal relief for state local governments, businesses, and individuals. She stated that it is important that there is national guidance for safe practices in airports and on airplanes, so that travelers can expect consistently safe experiences as they travel across the United States.

Godwin concluded that a national repository for flight manifests is needed, including contact information for all travelers. This should be information that could be accessed by local health jurisdictions when they are doing contact tracing, just in case someone who was on a plane that came into their jurisdiction ends up testing positive. Finally, she added that a national communications campaign about the importance of adhering to preventative measures, both in airports and on planes, would be beneficial for airline employees, airport employees, and travelers.

Hamm-Niebruegge then introduced Baruch Fischhoff.

**Passenger Risk Perception, Confidence and Behavior**

Baruch Fischhoff, *Carnegie Mellon University*, Presenter

Baruch Fischhoff started by discussing the science and the practice of risk communication. Fischhoff noted that many people are facing stressful decisions, including making ends meet, doing their jobs, and safely taking care of loved ones at home. Other decisions include those that people make related to finding food supplies and medication, supporting the vulnerable people in their communities, interpreting their own health, and navigating healthcare. He added that many are making travel decisions and that sources of information are imperfect, may be biased, and may include unqualified evidence. Fischhoff stated that the mental models used for dealing with diseases and travel may lead many astray, as there could be confusion from jargon and vague terms. He said further that he hopes that there is going to be a vaccine soon and to recognize that there are nonscientists with inadequate information and contradictory claims. He added that this a very difficult
information environment and reiterated Godwin’s statement that this is new and there is a lot to learn.

Fischhoff continued by asking, “What do we need to know about any of our decisions, whether it’s travel or health care or going to the playground with our kids? How big are the risks, what actions cause and reduce those risks, and how good is the evidence? How confidently, can we take different actions? What is likely to change either in the world or in the evidence and, finally, whom can you trust?” Fischhoff said, “Without that knowledge, we are left to guess, drawing on our own imperfect mental models about how various parts of the world work.” Fischhoff stated that people are vulnerable to misinformation and disinformation and would find information online if there is no good information from authorities. Furthermore, Fischhoff said that it is important to have both the process and the content matter in getting the communication right. He explained that the process must demonstrate concern for people and be collaborative to convey a shared faith of safety. The process also needs to be adaptive because the world is changing in terms of the virus and what institutions of science say. He added that the content needs to be relevant and reflect an analysis of people’s decisions in what they need to know, not what they think they need to know or what we want to tell them. Content needs to be comprehensible, and it is important to draw on behavioral research, particularly when things are not intuitive, such as how exponential processes grow and how diseases disseminate through populations.

Fischhoff outlined a strategic approach to process, referring to a diagram from the Canadian Standards Association dated from 20 years earlier that was first implemented by the Canadian Aviation Authority. He described the elements in a risk management process, where there is two-way risk communication that does not start until it is established with the public to determine importance and ensure there are no surprises. He added that while the world changes and there is reliance on your partners to help alert you to those changes, this demonstrates commitment by senior leadership to this two-way communication with the public.

Fischhoff explained how a strategic approach to content has three stages: the first stage is analysis, which is to figure out what decisions people face; the second stage is to find out how they are currently dealing with those decisions without any communication; and the third stage is intervention, which is to consider how people can be helped to make better decisions.

He added that this general process can be applied to just about any decision where there is risk or technical information. He described what decisions people face using a decision tree, which starts a decision with various sources of uncertainty and outcomes, and how versatile these tools are. A second tool, summarizing the quality of the evidence, is done by using a method that has been used by the Bank of England. This method was used in stress testing of the British economy since the 2007—2009 collapse and involves presenting the uncertainty surrounding projections for the British economy and determining how there needs to be an understanding of uncertainty and risk when making a decision. He stated that often people need to know how a decision was modeled in order for them to trust the conclusions.
Fischhoff stated that evidence can be created from old and new sources, citing the National Academies’ Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats that is doing work on COVID-19. This committee is chaired by Harvey Fineberg, a former president of the National Academy of Medicine. Fischhoff said that he is a member of this standing committee, which has produced consensus reports reviewed through the National Academies’ rigorous peer review process and said what was known about these various topics. He added that these reports can be found online.

He added that in the past, the National Academies has taken maybe 18 months to do these reports and recently they have been done much quicker. There is a list of early reports on unrelated topics that provide an information base that can then be adapted to the specific properties of COVID-19. Fischhoff continued that there is a large research base going back a century on how to communicate information to people, emphasizing that the National Academies of Sciences, Engineering, and Medicine has organized good resources, including special issues of the Proceedings of the National Academy of Sciences of the United States of America on the science of communication. Most of these reports, he added, are publicly available as free downloads.

Fischhoff also added that he and his colleagues have done work on pandemic diseases such as papers on H5N1 as well as a survey of people during the Ebola virus. They found similar problems in the degree of public understanding. Often, the public is viewed as, or treated as, hysterical or emotional. Said Fischhoff, “[I]f you have people’s attention and if we do our job and communicate, the public will be there for us.”

Fischhoff indicated that in the science of judgment and decision-making, his area of expertise, there are people who work on each of the topics of principles of judgement. He described that judgment is how people assess their world and that people are very good at tracking what they see. Researchers who study this say they automatically calculate how often things are seen, but they are not very good at detecting sample bias or things that are overpublicized. People tend to overestimate things that are underpublicized and tend to neglect that which is correctable. He added that it is understood that this is how people work, and there are people who spend their lives working on the details of each element of judgment. He further described principles of choice that involve how people combine what they believe with what they want. There is also the cognitive process, which is how people think, and there also psychologists who study social and emotional processes. He said,

Emotions can both cloud and focus thinking, which are both good and bad. We know the poor communications can needlessly increase anxiety and can generate hostile emotions and undermine trust if we don’t do our job right. And then finally, social pressure can lead people to act against their own best judgment. . . . Perhaps [such social pressure was] most easily seen or felt when we were teenagers, but it happens when we get pulled along in the things that we know we shouldn’t do. There are people who study when this works and can help when this is going to happen in different situations.
Fischhoff stated that people who study individual differences say that it appears that there are some people who are better decision-makers than others as a function of their upbringing, which is reflected in the decisions that they make. He added that there are differences in people’s decision-making styles, which he cited are important to respect in a diverse workforce and in members of the public but are hard to measure. He indicated that it is hard to say that people are like this or like that, but it turns out to be harder to measure than competence. The National Academy of Sciences has been a leader in interventions on helping people make better decisions. He added that while we have antivirals, we hope to have vaccines; it is important to make certain people know what they can and cannot do and have a science base for all of these things.

Fischhoff further said that applying this science requires several things, including substantive expertise from experts such as Godwin and her colleagues so as to get the facts right. People such as those in the National Academies’ COVID-19 community are synthesizing the research, which is currently very scattered. To get the right facts, it is important to have a dialogue with your partners, know what the issues are, and have a process for rapid message testing so that what is heard is what was intended to be said. He added that there is no excuse for not doing message testing—it is neither expensive nor time-consuming and everybody needs to test their messaging. Often psychology shows that everybody exaggerates how well they understand other people. Lastly, he said that a strategic commitment to risk communication cannot be at the end of the pipeline. It needs to be integral with the risk management process.

Fischhoff concluded with a proposal to create a resource center that will provide publication-quality support in developing communications, because getting this right is as important as getting the scientific record right. Common templates and terms are needed, as is framing problems in the same way and getting everybody to be speaking from the same page. Finally, it is important to extend an organization’s absorptive capacity when there is not in-house expertise. Having a resource center for the aviation industry would enable work with internal communications staff, human resources, and safety staff, in order to provide complimentary communication skills.

Health Update Q&A

Fischhoff was asked to provide a further explanation of an influence diagram that comes from Bayesian decision-making as a way of organizing data. He said that it is a model for doing computational simulations of how complicated systems work, their health effects in the air, and what health effects to predict.

He cited an example of the intrusion of a *Cryptosporidium* parasite into the domestic water supply and how it will depend on the factors that flow into the effects on health. Questions to consider include
• What is the measure of contamination?
• How well is that contamination picked up so it will go from contamination to routine testing and then flow through the process of measuring contamination?
• How well-coordinated is the water utility with the public health officials?

He added that final questions concern who drinks the water and what people have done to protect their water. Fischhoff explained that as he understood the science, cryptosporidium is something that someone cannot test by themselves. Therefore, if people test positive, they have probably put themselves at greater risk than had they not been tested. If people boil water appropriately, then they are probably at less risk than they would have been had they not boiled water. On the other hand, if they do not boil the water appropriately, they may have a false sense of security. Fischhoff indicated that this is a Bayesian model taking into consideration varied forms of information. One central question of using the model is, “What is the transmission rate within the system and how often are people tested within the system”? He explained that it is just a class of modeling technique that enables inputs of diverse data to estimate risk.

Hamm-Niebruegge then asked both presenters: “What is the panel’s opinion about conducting COVID-19 tests physically at airports across the country if the test can be a rapid result?”

Godwin responded by stating that it is necessary to hear the perspective of those who are working in airports, specifically, about what their constraints are. Godwin stated that “from a public health perspective, we are not ready to do that at this point, regardless of how feasible it is for airports, because the rapid results tests do not tend to have very good levels of false positives and false negatives right now, and testing could create unmanageable lines, which is not a good use of resources.” Conversely, she stated that at the University of Washington, they have been using what they call “access stations,” but in the airport setting, she described that when you check in and indicate that you do not have hazardous materials in your bag, you might also need to test that you do not have symptoms associated with COVID-19. It is a good way to remind people that they are not supposed to be flying if they have those symptoms. She added that it is still an honor system, but, just as it works for keeping people from carrying hazardous materials, it might be worth considering.

Fischhoff responded that it is very important to get authoritative estimates of the sensitivity and specificity and the performance properties of the test. Doing so would likely require somebody from either a university or an industry body to estimate the rate of false negatives and false positives and the possible liabilities if the tests are not as good as they are billed. He further indicated that as stated in the news, there have been problems with the reported numbers and actual performance standards of the tests.

The next question posed by an attendee was, “What should the FAA regulate or mandate to bring back the public confidence to fly again?”
Fischhoff responded that these are economic political questions. He said he believed that the whole system would fail if people do not believe what is said about the safety of flying again and if information is not consistent with the facts. He added that it is important that the expectations that are being communicated are consistent and justifiable. He said, “That in this country, there are places that are opening up but people aren’t going out. They are afraid since they haven’t seen the kind of reassurances and suspect that people in many of those areas have not had a [disciplined] approach to communication, getting the analysis, getting the testing right, making sure that you draw on the science that communicates things that are not inherent and that can be tricky.”

The moderator asked the next question: “How long do you expect the social distancing recommendations to remain in place?” Godwin responded that each of the 50 states is already starting to list some social distancing restrictions. She said that this varies from state to state because it is under state jurisdiction, and so depends upon where people live. Each governor and state health officer are weighing in on not just public health considerations but also on economic and political considerations to make those decisions. Fischhoff replied that how well this works will again depend on how effective the communication is. For instance, the two neighboring states of Pennsylvania and Ohio seem to have a nice division of labor between the governor and the secretary of health. Fischhoff said that “a governor who gives the policy doesn’t pretend to know the science and hands it over to the secretary of health, who is a dedicated physician and public health official,” which he indicated was a good model. Fischhoff added, “The more that model is followed, the more stable our situation will be and the better [we will be] able to maintain an upper course.”

Godwin was asked if she could address the modest change CDC made to the surface transmission risk. Godwin responded, that, on the basis of looking at the CDC documentation, this was just a clarification. She said,

As we’ve moved from guidance that was based upon what we knew about other respiratory pathogens and other coronaviruses to information specifically about this coronavirus in real-world settings, . . . what we know is that the main route, the highest risk for transmission, is through droplets, and that is why it is so important to maintain that 6 foot distance and not to stay in close contact with people for extended periods of time. . . . Public health officials weren’t saying people couldn’t get the virus from surfaces, so it is important to clean surfaces and for people to do the hand-washing with soap and water or use hand sanitizer.

Godwin added that health officials were just trying to clarify that touching surfaces is a lower risk than close contact for extended periods of time.

Hamm-Niebruegge added that she believed there was a recommendation that only people who have COVID-19 should wear the face mask. Then that also changed and health officials suggested that everyone should be wearing a mask other than children under two.
Godwin added that the change to recommend face masks was really due to new information, which was the component of people who are asymptomatic being responsible for a significant amount of the transmission. In addition, it was the realization that although cloth face coverings do not provide fantastic protection for the wearer, they actually provide pretty good protection for other people nearby. She added that “since we have a significant number of people who have COVID-19 but don’t even know it, wearing a mask is a way of protecting other people from yourself.”

Fischhoff added that he worked on the National Academies COVID-19 committee to produce a report on handmade face masks (adding this was not a major topic of research by the biomedical establishment). He stated that the report was clear that some of the contradictory recommendations were made because there were issues with solving different problems about what is known and unknown regarding inhaling, exhaling, protecting yourself, and protecting others, but people have alternative intuitive psychological theories without any support. He said that, “while we wouldn’t speculate about aerosols, people shouldn’t speculate about human behavior without evidence.”

Hamm-Niebruegge posed another question to Godwin: “Can you address the problems with some of the testing results? How much confidence should we have in the data that is currently published?”

Godwin responded that “the data that we have is incomplete and we can assume that there are more people who have been infected with COVID-19 than the number of cases that have been detected.” She added,

Over time, we will end up having better data as we end up doing more testing as we understand the disease better. It’s really hard in the midst of a pandemic to have high-quality data available in real time. Nonetheless, there are still basic things that we know about how to reduce risk of transmission that are really important. It is also really important for people to make sure that they’re doing what they can to reduce their own risk and not place people with vulnerabilities at risk.”

Hamm-Niebruegge asked, “So the ultraviolet lighting is currently marketed as a tool to disinfect aircraft. Can you share any insights on the viability of the ultraviolet lighting?”

Godwin responded that she would like to first see some actual data for COVID-19 itself in the settings being discussed and how the people who would disinfect airplanes would use that product.

Fischhoff agreed and said that, “We have this situation where we have a strong need for trusted regulatory bodies, and there are unfortunately lots of people taking advantage of the situation and selling things that don’t really work so are costing lives.” He added, “Because people think they have protection and they don’t, it undermines faith in everything. Citizens can’t tell what has been proven and what hasn’t been proven. So it is very tough, if we can’t get it from the gut.” He added that there needs to be tough standards for certifying potential solutions.
Hamm-Niebruegge asked, "How long will practicing social distancing need to be done on an aircraft, and what is the reality and financial impact of trying to keep social distancing onboard? What is the economic viability in the long term? Should it be a requirement on aircraft?" Godwin responded that there are so many other factors that play into the decision-making. She added that from a public health perspective, seeing people distance by 6 feet and wear face coverings is ideal, knowing that sitting in close proximity to someone from outside your household for an extended period of time would count as a high-risk activity. She added that how long people can maintain social distancing guidelines and how realistic those guidelines are is in terms of the economics, is something the industry is going to have to figure out. She hoped that with the current low demand for flights, there is consideration in terms of seat assignments and trying to create space where possible, but she reiterated that this will need to be figured out.

Fischhoff added that he would like to see people like Godwin and her colleagues do modeling with the HEPA filters, and, while there is a lot of concern for air quality in planes, there are assumptions made about disease load and screening. He indicated that often these models, similar to the one he showed earlier, can have unintuitive results. Sometimes it turns out that the prevalence is lower in the population. People wearing a face mask with a certain amount of self-discipline ultimately stay home to avoid getting infected. He added that these dynamic interactive nonlinear models have unintended effects.
Rhonda Hamm-Niebruegge, St. Louis International Airport and Chair, ACRP Oversight Committee, Moderator
Roger Dow, U.S. Travel Association, Presenter

Rhonda Hamm-Niebruegge introduced Roger Dow, President and CEO, U.S. Travel Association. Dow provided an overview of the U.S. Travel Association, which represents all segments of the industry and does lobbying, communication, and research for the industry. Dow expressed the need to get more people traveling during this unprecedented downturn in the aviation industry and presented guidelines in several areas: transmission barriers for travelers in both the redesign of public spaces and touchless solutions; enhanced sanitation procedures; health screening measures; health procedures for those testing positive; and food and beverage guidelines. He directed attendees to industry guidance at ustravel.org/IndustryGuidance.

Dow stated that the U.S. Travel Association’s mission is to get more people traveling to and within the United States. He said, “From an airline and an airport standpoint, this is the most horrific thing we’ve ever faced.” Dow cited that the industry had lost $519 billion this year, which is down 45%, and that many people are out of jobs. There are 15.8 million jobs in the travel industry; of those, 8.1 million, or 51% of the industry’s employees, are out of work.

Dow added that in 1933, the worst year of unemployment in the Great Depression, unemployment was 25.5%. The aviation industry is currently two times worse than at that time. Dow stated that after September 11, the aviation industry came to its knees in 1 hour. Every airline everywhere in the world was grounded, and it took a long time to recover. He pointed out that that was an incident that took place in three locations and, as terrible as it was, people understood it. He said,

Now, analysts have indicated that this is nine times more disruptive than September 11. . . . How do we bring this industry back together? Even though we are a unified industry, we all have each of our own areas we work on and we do work together as a whole, but I have never seen an industry come together more than through what has happened now.

Dow described the information his organization put together, titled “Travel in the New Normal,” which is guidance for promoting health and safety guidelines for airlines, airports, hotels, convention centers, travel agents, theme parks, and cruise lines. Some 30 different organizations came together representing the industry with a set of guidelines. He stated that consumers are confused as they are receiving mixed messages from the media, in
which some say this is catastrophic and another report says it is overblown and has political implications. He said, “Consumers need confidence for reliable health and safety information; otherwise, they will likely stay home.”

With that, he asked, “What if the industry told you it is okay to travel again?” He cited that 23% said they believed that statement, and 50% said they would not believe it and they thought it was self-serving. He then asked, “What if the government told you that it was okay to travel again?” and about 25% believed it, and the same number said they were not sure they believed it but that they thought this was to get America moving again. Further, a question was posed, “What if you heard from medical experts that it’s safe to travel now?” Thirty-five (35%) of total responses said they would travel, he said, but when the three questions were put together and the question was asked, “What if you heard from the industry, the government, and from health experts with similar guidelines that are believable and credible, would that change your incentive to travel and the response?” The response then increased to over 60% who said they would travel. Dow said, “That is why it’s so important that we as an industry work together.”

Dow walked through the six different areas in the guidelines. The first area is around transmission barriers. He indicated that the industry needs to modify its business operations, alter employee practices, install barriers, and implement touchless solutions wherever possible. Airports and airlines are reacting in different ways. He stated it is difficult to physically distance on a plane or to operate a business and be 6 feet apart. He added that it is about the kind of transmission barriers that can be put in place, modifications to operations, and the added sanitation. He stated that there are many ways to address touchless solutions with biometrics during the TSA experience. He elaborated that biometrics can be used for security screening at TSA checkpoints rather than touching driver’s licenses numerous times. Also, there are touch points for reservations, check-in procedures, baggage check, and purchases, etc. Dow stated, “The more we can go touchless, the better, and, thankfully, the technology is available today.”

Dow stated another area is implementing enhanced sanitation procedures, screening that the industry should be doing for employees, isolating workers who have symptoms, providing health resources to customers, and having procedures for when an employee or passenger tests positive. Dow expressed that he thinks it is very important to have that capability and an understanding of what the steps are. The next area is to look at health security screening and testing. He stated that 63% of people said they want some kind of certification for sanitation. He stated that there is discussion about partnerships with the Mayo Clinic, the Cleveland Clinic, Johns Hopkins, etc., about a certification and how the guidelines would be developed in concert with the Infectious Diseases Society and other physicians from the preventive medicine area. Next is health screening and testing and what happens if someone tests positive. The last area is around food and beverage guidelines, which are changing in restaurants around the country. Changes are in service standards for opening and in assurances to the customer that they are following National Restaurant Association best practices. Dow stated there is a shared responsibility which they have as organizations, whether it be airports, airlines, or hotels, and responsibility on
Dow outlined the steps his organization’s public affairs division has been taking to work with the aviation industry: They are active in making sure the Paycheck Protection Program (PPP) was available for food and retail employees. He added they are trying to address the 501(c)(6) organizations that were left out of that provision, which included convention and visitors bureaus, Broadway, museums, etc. Dow added that the U.S. Travel Association was very influential in getting $10 billion for airports but is going to try and get more for the airports, realizing the importance of airport viability.

Dow stated they are pushing for liability protection, with hopes of avoiding frivolous lawsuits such claims of getting COVID-19 while on a plane or going through an airport. Dow added that the most important thing he believed was that people are going to start traveling domestically first and then will venture internationally. They are seeking an “Explore America Travel Tax Credit,” which is a tax credit through 2021 to stimulate legitimate travel. He indicated that they also want to restore the business and entertainment deduction to include all things such as tickets and food. Last, he added that they are looking at a stimulus of $10 billion to go out to communities and cities to start encouraging people to travel again.

Dow summarized by saying that “without airports, without airlines, we don’t have a travel business,” and that “what you do is so important.” He added that they have worked together with Airport Council International and everyone in the airport community and provided information about their guidelines (available at ustravel.org) and thanked everyone for the shared partnership.

Hamm-Niebruegge closed by stating that “no one can do this alone. Every single piece of this industry has to be coordinated and working toward a similar . . . path. . . . [T]his is one of the most critical things and the reason we’re doing this today.”
SESSION 4
Airport Case Studies and Best Practices

Rhonda Hamm-Niebruegge, St. Louis Lambert International Airport and Chair, ACRP Oversight Committee, Moderator

Presenters
Lance Lyttle, Seattle-Tacoma International Airport
Joseph Lopano, Tampa International Airport
Kirk Hotelling, American Airlines
Andrew Boyett, Southwest Airlines
Joe Thornton, HMSHost
Rob Mitchell, Uber
Daniel Price, Transportation Security Agency

Rhonda Hamm-Niebruegge introduced the next segment, which is the airport’s perspective with Lance Lyttle, Managing Director, Seattle-Tacoma International Airport (SEA), and Joseph Lopano, Chief Executive Officer, Tampa International Airport. Both Lyttle and Lopano presented current practices implemented at their respective airports, including observations of immediate actions to take and how to lead the recovery effort. They both experienced the reduction in flights, subsequent retail closings, and employee furloughs and layoffs. Some temporary solutions included a hiring freeze and reduction on capital projects, though they found this is an optimal time to move forward on funded projects with limited activity in their airports. They both are working with industry associations to ensure there is adequate federal funding available and are keeping communication channels open within and outside their airports. A significant effort toward increased sanitation was implemented, as were telework options for their employees where possible. Both passenger and employee confidence is sought to bring the activity level back.

Airports—Executive-Level Discussion of Current and Future Plans
Lance Lyttle, Seattle-Tacoma International Airport
Joseph Lopano, Tampa International Airport

Lance Lyttle began by stating that when SEA was faced with the COVID-19 crisis, SEA asked three questions: (1) What do we need to do immediately to weather the storm? (2) What do we need to do to lead the recovery effort? (3) What do we need to do to move forward? They came up with a three-phase approach to address the COVID-19 pandemic. First, he stated, they looked at what they needed to do immediately, for themselves and their
tenants, to help get through this crisis. They also understood that, at some point in time, there is going to be a recovery effort and that they wanted to be a part of leading this effort. After they looked at what they needed to do, they came up with their “FlyHealthy@SEA” program. He added they wanted to ensure they remained ahead of the curve when the traffic started coming back, knowing this recovery would probably take much longer than before. He stated that the aviation industry has always been resilient and will recover at some point in time.

Lyttle stated they were only seeing approximately 2,500 to 3,000 passengers coming through a checkpoint during the height of this crisis, compared with 55,000 to 60,000 people coming through previously. He added that their airport dining and retail program had massive closures—60 out of almost 90 concession units closed. There were a lot of layoffs impacting the airports and regional staff, with about a 95% reduction in overall traffic at the airport, which, he said, “is extremely devastating.” Some of the immediate actions they undertook were to implement a hiring freeze with a focus on cash flow and a limit on any discretionary spending, to include traveling. They looked for anything they did not have to do in their 2020 budget. In reviewing their capital projects, of the two categories—(1) the cash-funded projects and (2) the bond-funded projects—they decided to move forward with the bond-funded projects if they could do them in a safe manner because that would not impact their cash flow. To preserve their cash, there were several cash-funded projects ($28 million) that they decided to defer. There were also some projects that they decided to move on with because they are security or safety related. They deferred the minimum annual guarantee for nearly all of their tenants at the airport, whether it was the airlines, concessionaires, taxi operators, or rental car companies. He added that this was their way of helping them to preserve their cash flow during this crisis.

Lyttle added that he believed, as mentioned by Dow, that the industry had $10 billion in the initial package of the CARES Act, which did not actually include airports. So they worked with Airport Council International (ACI), American Association of Airport Executives (AAAE) and very closely with the Airport Minority Advisory Council (AMAC) to get funding into the Act. He and about nine other airport directors flew to Washington, D.C., in the middle of the crisis and met with the White House staff to stress how critical this was. The industry was fortunate to then receive the $10 billion. SEA received $192 million, although this was still not enough for the $250 million deficit that it had in revenues; but, Lyttle stated, it still goes a long way.

He added that they focused on the things that could be immediately implemented to get them through, such as teleworking for employees who could work from home and having only essential people working at the airport.

Lyttle described the next phase, which was leading the recovery. They established some guidelines and goals, including maintaining a safe and healthy environment and restoring confidence in travel, as mentioned by Dow earlier. In addition to restoring the confidence of the traveling public, it was important to restore and maintain the confidence of the airport employees, tenants, and contractors. They had to be confident that the airport is a safe and healthy environment not just for travelers and that the enthusiasm that they had
prior to the COVID-19 pandemic was there to get the passenger volume back. Lyttle stated, “We have to get passenger volume back, no matter what we do. If we don’t have people traveling again, then we’re going to be in dire straits.”

Lyttle further stated that they had a three-pronged approach: industry, corporate, and actions that were specific to SEA. On the industry side, they have two members of their team that are part of the Airports Council International (ACI) World task team that looks at what needs to be done industrywide and worldwide to restore passenger confidence for travel and establish aviation industry standards. At SEA, in addition to aviation, as a port, they also have maritime and economic development as well. Lyttle went on to say that their chief operating officer is coordinating the effort at the corporate level about when to bring people safely back to the airport. He mentioned that they have specific activities that they are doing at SEA and showed a snapshot of the organizational chart that they put together to show the effort with their subcommittees. He indicated that there is a group that focuses on health and public policies. In addition, they have a group that focuses on their partners with the airline, rental car companies, and taxi operators. Furthermore, they have a group that focuses on the customer, customer feedback, and changes that must be made in the terminal and in the corporate and industry effort. He stated that communication is very important.

Lyttle expressed that it is important to have engagement and collaboration with other entities while looking at the return of travelers coming through the airport. Considerations include what needs to be done to maintain social distance, how best to promote a touchless experience, and who needs to be involved; such efforts cannot be done alone at the airport. Lyttle said, “You need the ground transportation, taxi and TNC [transportation network company] operators, the limousine drivers, the airlines, TSA, CBP [Customs and Border Protection], and CDC to participate as well as airport dining and retail.” He expressed that they need representatives from each of these groups throughout the airport to participate. Lyttle emphasized that they have a multilayered approach and that there is no one solution. They are doing multiple efforts to enhance cleaning, especially the various different touch points throughout the airport. He mentioned terminal improvements, such as signage and announcements by employees that remind people about social distancing. They recently passed the official policy of requiring everyone at the airport to wear a facial covering whether they are staff, a tenant, or a passenger. He showed some examples of practices implemented at SEA, such as the floor cards and sneeze guards at the common use ticket area counters and seating spacing markers and floor cards for physical distancing in the train boarding areas.

Lyttle mentioned again that communications, both internal and external, are extremely important and that when the COVID-19 pandemic started, they had daily e-mail notifications with corporate to communicate throughout the entire port. They are still continuing that three times a week. For the airport specifically, they have a weekly e-mail sent out to let their employees know exactly what is currently happening. In addition, they are sending out a biweekly live broadcast featuring Lyttle and other members of the management team answering questions and presenting information on their efforts and allowing for a Q&A session.
Lyttle further stated that external communication to the public and information to the passengers are extremely important, so his public affairs team has been working closely with print media, TV, and social media to get its message out. Lyttle described some of the issues that SEA is facing and indicated that their commission just recently passed a motion to come up with a plan for temperature checks at the airport. He indicated that partnerships are important and, although it is not their area of expertise, it will be important to rely heavily on the subject matter experts such as the CDC, the state department of health, the county department of health, and CBP (for international arrivals). He referred to Dow regarding consistency across the nation and said he believed that the federal government has to take measures to have a standard across airports. He felt that this is going to be important for restoring passenger confidence. Lyttle indicated that SEA is going to continue to adhere to the CDC guidelines and that they consider the CDC to be the subject matter experts.

He continued that, their innovations team, led by Innovation Director, Dave Wilson, is looking at everything, including doing its due diligence by investigating the feasibility of temperature sensors. He indicated that they are aware of issues with accuracy and false positives and are exploring true ultraviolet light cleaning, as mentioned by Godwin. He added that they are also exploring physical distance sensors, with the understanding that enforcement will be a challenge and are looking at health certificates. He indicated that privacy issues associated with this can be very controversial and added that they are heavily invested in touchless technology on the basis of feedback that they received from the subject matter experts on the medical and operational side. He added that they have tested this on international departures and are exploring it again, as well as the equity and privacy issues associated with it. They are exploring capacitive sensors as an example of a device that can be “touched” without using your hand and using stylists to touch and connect. They are also looking at voice recognition for the touchless process, whether it is an elevator or some other device. Finally, they are considering near-field communication and radio frequency identification (RFID), such as Apple Pay. Their innovations team is looking at, and doing its due diligence on, all these technologies to enhance the touchless experience going forward.

Lyttle summarized by stating that SEA has a solid plan right now and has established a great framework, but indicated that it is uncharted territory and there is no benchmark, since there is no reference point compared with what airports did before. He said he realizes that they do not have the answers to everything and are making decisions based on assumptions about decision dates and data that they do not have now. He realizes that they do not know what is going to happen in the future. He added that, what they do know is that they are going to prioritize and invest heavily in technology. They are anticipating emerging policies at the state, federal, local, and county levels as well. He stated that they will have to gather feedback and make the adjustments as they go along and are going to continue to communicate internally and externally, which is important to the passengers and also to their employees and tenants to make sure they are kept in the loop.
Lyttle ended by saying, “This is a new world, and I don’t think we can look at the traditional way how we solve problems or how we operated, and we will have to innovate our way out of this crisis.”

Hamm-Niebruegge then introduced Joseph Lopano, CEO, Tampa International Airport (TPA). He stated that TPA has started a program called “TPA Ready.” Lopano said he served on the governor of Florida’s Task Force for reopening the state, which started on April 22, 2020, and was joined by representatives from Universal Studios and Walmart. They discussed the different methods they employed in order to keep their customers safe. He said they started “TPA Ready” knowing that they were going to be reopening the state at some point. He said that “it was really a project of hope because up until that time, it seemed almost hopeless.” He added that they were seeing their passenger numbers go down and looking at deserted terminals. Their employees were really motivated and started thinking that something positive could happen by creating this program. He elaborated that first they got word out to the public with five different elements. Lopano said that the first element of the name “TPA Ready” really says the whole story, as it tells the customers that their employees are ready. They wanted to prioritize the health and safety not only of travelers but also for their team, so making sure the facilities were safe and clean for the team and travelers were priorities.

Lopano said, “Number two was clear communications. As someone said earlier, lack of good communications results in bad communications and you have to fill that with accurate and clear communications, especially with your employees.” He added, “especially frontline employees—they’re stressed out, they have a lot of worries, and you have to communicate with them often and accurately.”

Lopano stated that the third element was organizational resilience, and shortly after March 15, 2020, they started remote work. This taught them a lot, since remote work was something that they had talked about and were prepared for, but nobody wanted to try it. The fourth element was strengthening the business, and they did a lot of things that Lyttle talked about. They had a hiring freeze and deferred some projects and received $80 million through the CARES Act. While he indicated that this helps, they were still going to be short on revenue by $240 million dollars over the next 4 years. He referred to Dow and said they will still need more help to get through the storm.

TPA increased its lines of credit and deferred some projects but also accelerated some as well. Lopano indicated that TPA is an engine for economic recovery and understands its role in the community. It has to serve its stakeholders and, to the extent that it can keep projects going, is going to find a way to keep especially small contractors on the job.

Lopano added that TPA currently has 250 acrylic barriers and has 2,700 ground markings and stanchion banners to keep people safely apart that say “Leave Space Stay Safe.” They have 3,500 seat wraps to keep people apart, as well as nearly 100 hand sanitizer stations. On April 20, they added mask requirements for all employees, including all tenants, such as airlines, concessionaires, and others. He stated that they have encouraged other customers to also wear masks. They also increased sanitation using the latest technology, such as
electronic foggers. They strongly urged the public to wear masks and arrive 2 hours early. They encouraged mobile check-in and carry-on luggage to reduce touch points and thus avoid going to the ticket counter to check in or use baggage claim to pick up bags.

Lopano stated they used to allow meeters and greeters to come into the main terminal and meet their guests. They are now requiring them to stay outside in the cell phone line. He reiterated that the main theme, as others have said, is to restore confidence. The key is communication, and he said,

We are ready for travel to commence, a message that was picked up by everybody. We weren’t the only ones looking for hope—everybody was looking for hope. . . . So we were very surprised—NBC Nightly News with Lester Holt had us on, and it was a good interview. We were also picked up by the Washington Post and Telemundo Hispanic stations. The important message is that you have to get this word out to your internal audience, your employees, your government officials, and do so in a way that it becomes a national story. If you can, it is what’s going to make people confident to come back to travel. They know that everyone along the way is doing their part and the airport’s a big part of that journey.

Lopano said that he also informs and engages his team with weekly videos, noting it is critical to make sure that they are communicating accurate and reliable data because, he said, “this is people’s livelihoods. This is their job and they spend a lot of time each week here and are working the frontlines, so it is important to make sure they know what’s going on.” He stated that they will continue with weekly communications and that they also started a new effort called “TPA TV” and are using a lot of technologies that they might not have otherwise used.

Lopano elaborated on TPA’s remote work for nonessential employees that started on March 15, 2020, and was prepared with the information technology (IT) department. IT staff purchased certain IT components that would allow for this, but they just were not sure they were ever going to do it. He said, “Everybody learned how to use Microsoft Teams or Zoom and it’s really, really changed our culture.” He added that they have increased communications and have given out care packages with masks, hand sanitizers, and touchless keys for all employees. They are also looking at staggered work shifts, which they have already implemented for frontline workers, with 1 week on/1 week off to help prevent the spread of the virus. He added that they are developing the workspace of tomorrow. They are in the middle of building a 300,000 square-foot, nine-story office center; three floors will be for their office planners. They had their office planners look at various seating options and cubicles and then found out they can work from home (or anywhere they choose) just as easily and effectively. This has changed their thinking on what this new office center should look like. While they had a culture of people that were used to their offices and were considered important if they had an office, they realized they would have to change their thought process and be open to ideas about how people could work remotely using this new technology. Many people said they would rather just work remotely if possible. The timing is fortunate, as they are now in the middle of changing the interior structures of this building to account for the new normal.
On a positive note, Lopano stated that they were able to advance $150 million in capital projects with the limited activity and work during the day and close roadways. They are in the middle of a $700 million upgrade, which includes new remote curbsides, roadway expansion, taxiway improvements, and the sky center office building. He added that the ticket level upgrades were going to be done at night and that now they have been able to work 24/7, bringing them way ahead of schedule.

Lopano stated that TPA is happy to see that, week over week, passenger traffic is increasing and airlines are making commitments for much more flight activity, a very encouraging sign. The airport is also reevaluating its budget and has gone to relief efforts for its tenants and deferred rents for its concessionaires, rental car companies, and airlines, who it realizes need help; TPA will help to the extent it can. Lopano stated that they are going to continue benchmarking and looking for best practices and said, “We do need industry standards so that we can ensure a consistently safe experience,” as stated earlier in the Health Update. He also indicated that they are in a position for a long-term recovery, as they are in a great economic area in the Tampa Bay region. He concluded by stating that “Tampa Bay region was smoking before this, and we’re going to get back to it pretty soon.”

**Airport Case Studies and Best Practices Q&A**

**Rhonda Hamm-Niebruegge** asked, “We all know that the CARES Act required that we keep 90% of our employees on the payroll. Has that been a hamper to the airport, based on the financial challenges that we are all facing, and should that have been a piece of the CARES Act”?

**Joseph Lopano** responded by stating he did not think it is hampering them. They are constantly rated as one of the best airports in the country because of their great facilities, but more so because of the great people who work at the airport. He stated that they are going to come back, and they are going to rebound. While they may not rebound this year to where they were, they will eventually rebound. He added that he plans on keeping his team together and, to the extent that they can, they are going to keep everybody on board and grow back to where they were before.

**Lance Lyttle** added that it is the same for SEA and that the CARES Act requirements are not hampering him either. He said that “in fact, that was our intention, even without the stipulations associated with the CARES Act.”

**Hamm-Niebruegge** asked Lyttle if he had to delay any safety-related projects.

**Lyttle** responded by saying, “No, . . . we categorized the projects in terms of bond-funded and cash-funded projects and, on the cash-funded side, the projects that are safety related and security related, we moved forward.” They also looked at projects that need to be done to lead the recovery effort to keep people employed, especially the ones that can be done
safely adhering to the state guidelines. He summed up by saying, “There were no safety or security projects that were actually deferred as part of this.”

**Lopano** agreed that it was the same for him and stated that TPA was able to defer about $100 million dollars in projects, but, at the same time, was careful to look for opportunities to accelerate projects, which turned out to be a good exercise.

**Lyttle** added that it was the same thing with SEA’s international arrival facility, where they could shut the taxiway down to accelerate construction and had opportunities to accelerate several other projects because of the lull in traffic.

**Hamm-Niebruegge** asked, “We all talked about the communication effort and how important that is, but there can be overcommunication. And do people become tone deaf to the important pieces of communication if there’s so much of it?”

**Lopano** responded, “I think it’s critical to make your messages relevant, so they have to be timed well and can’t be overcommunicated. When they are communicated, it is important to make sure that the content is meaningful for folks to absorb. If you’re just doing videos for the sake of doing videos, people aren’t going to open the e-mail.”

**Lyttle** responded, “As I said in the presentation, on a weekly basis, we send an e-mail out just keeping people informed of the reality—good, bad, or otherwise. Every message has a ray of hope in there.” He stated further that, as Godwin mentioned, they need to continue flattening the curve, even with concessions reopening, etc. Every other week, they have a live, interactive broadcast, rather than just an e-mail. This broadcast goes to the entire team, and anybody across the airport can ask questions about what is happening, including him or other members of his management team. This is on-the-spot, live communication that has been very successful, with a lot of participation by his staff.

**Hamm-Niebruegge** posed the last question to Lopano: “You mentioned that you’re redesigning your new employment center and thinking about the future and remote work. When you talk about having that team that is interactive, gets along so well, and brings good ratings to TPA, how do you balance the concept of people working from home and losing that interactivity among employees, so that you know each other? What does that do to the business traffic if people don’t come back to work because they have become so used to working remotely? So it’s a dual edge, not only for internal employees, but for the business traffic that we so desperately need.”

**Lopano** responded, “I think the balance is that people can work remotely if they can, but even those that prefer working remotely have a need for social interaction. So they will have a place at the office to come [to] and can work from the office in a shared space. What we found is that as long as you have a laptop, you can be working from a coffee shop or anywhere else. And you’re being productive, you’re getting the job done. I think that there’s going to be both. There’s going to be some portions of remote, but there’s always going to be that social need.” He added that as far as the business traveler goes, he believed “that once you have a vaccine, people will want to go back to the way it was, which is face-to-face, maybe some [working] remotely, but there”s a need for both of those things.”
Lyttle responded that just before the pandemic started, SEA began a pilot project for remote working, because it was running out of office space at the airport. He added that the intention is to have people do a mix of work. He and his staff have done surveys with staff that show while people enjoy working at home, they actually miss that social interaction of being at the office.

He added that, with regard to the business travelers, nobody knows exactly how fast the recovery will be, but that there are certain areas around the world where having a meeting via video conferencing is not part of the culture and there is a need to be there in person. Lyttle believed that would probably spur or continue to spur business travel in certain parts of the world or where having a meeting via video conferencing would not work. However, a lot of people realize remote work is effective. This may have an impact on how business travel takes place going forward, but it has yet to be seen how it will pan out.

Airlines—Discussion and Highlights of What Plans Are in Place

Kurt Hotelling, American Airlines
Andrew Boyett, Southwest Airlines

Rhonda Hamm-Niebruegge introduced Kurt Hotelling, Vice President, Airport Affairs and Facilities, American Airlines, and Andrew Boyett, Senior Manager, Customer Experience, Southwest Airlines. Both Hotelling and Boyett expressed the significant downturn in their passenger activity and subsequent financial losses. Airlines are working collectively with each other and the industry to implement guidelines and follow practices to get the traveling public back and both Hotelling and Boyett detailed ways airlines are providing a safe and healthy operating environment. Each speaker highlighted his respective airline’s sanitation and operating procedures to ensure appropriate face coverings and safe distance requirements.

Hotelling explained why, coming from an airline, he began his presentation showing an image of a boat and referenced the old adage “of a rising tide lifts all boats.” He indicated that both Southwest Airlines and American Airlines provide particular policies and strategies to get through this pandemic and said that the public could easily be getting the same information from other airlines. Hotelling made the point that “We are not trying to compete with each other in this arena. We compete with each other on many things, but in this, we all benefit from each other’s policies in creating a safer environment in our airports, on our aircraft, and in the policies that we implement for our team members.” Hotelling stated that some of the things that American is doing are not unique to American and can easily apply to anyone else.

Andrew Boyett stated that in hearing from Dow earlier, mentioning how to bring the industry back together again, Boyett said it is a team effort and that airlines cannot do this alone. He continued that, “There is no silver bullet, there is no solution that airlines can put in place to get customers to come back. It has to be a collaborative, multilayer, data-driven approach between the regulatory environment or public health officials. In addition, it also
involves the collegial attitude between the airlines to coordinate and cooperate and how we get air travel to come back."

**Hotelling** stated that, so far this year, there has been an impact on passenger volumes from the Pacific region, as China went through this crisis, and then, in March, Italy’s crisis impacted the industry as well. He added that there was a little upward trend in passenger volumes in May.

Hotelling continued with another slide from his presentation depicting the numbers of aircraft operations and stated that they are all collectively running about 70% fewer operations than in 2019, which is significantly less (see Slide 4 https://onlinepubs.trb.org/onlinepubs/acrp/InsightEvents/COVID19/KHotelling.pdf). He pointed out that, currently, the lines in the graph are still flat, but said he believed that the number of operations is ticking up in June and will continue further into July and, hopefully, throughout the year, subject to demand. He showed another slide showing the average domestic U.S. flight is carrying about 47 people; the numbers earlier this year would have been double that on many more flights. Hotelling’s next slide depicted passenger traffic and demand and acknowledged that there is a demand-driven problem. This problem is not the same change in passenger traffic and demand that the industry has faced over the past 10 years. He added that before COVID, they went through a lot of consolidation and fixed some of the underlying structural problems of the airline industry, and with what they are doing now and in light of what the other panelists have talked about, they are working to get these curves moving in the right direction.

**Boyett** added that they want their curves to be flat, they need to come back up into positive growth, and they are all very hesitant to be optimistic. He indicated that they see that first movement and beginning to tick up and are excited to see an increase in passenger activity in some recent polling. For the first time since the beginning of this crisis, people who said they were comfortable flying ticked just above the number of people who said they were not comfortable flying. He added that while this is not a wide margin, it is encouraging, and they are starting to see the curve moving up.

**Hotelling** responded that he believed that he has seen some recent reports that Delta added 100 new flights back in June over its original pre-COVID schedule, which it would not do unless it saw demand for these flights, which he added was encouraging. He continued with describing America’s guiding principles and indicated that all of the airlines have something similar. Their priority is to put out their new policies and procedures about keeping the safety and well-being of their customers and team members as their top priority and minimizing the risk to the traveling public and to their team members.

Hotelling added that the approaches are changing and have changed since March. He reiterated that states have responsibility for putting out much of the guidance and guidelines that the airlines adhere to and that those are changing all the time. He said, “We have a whole team that does nothing but look at the latest guidance from health experts to see what we need to do and what we might need to change in our various workplaces.
around the country.” He added that their initiatives include clean airports, clean airplanes, healthy team members, and face coverings.

Hotelling added the last overarching message he had heard from many speakers is that of shared responsibility. His message of staying home if one feels sick is directed not only to those flying American Airlines and its team members but also to the traveling public as a whole. He also stated that throughout every step of the journey, American Airlines is trying to give people that confidence and peace of mind as they travel.

He indicated that he heard from the Ohio governor that the message was not about eliminating the virus and that this virus might be with us until we can get a vaccine. It is not about suspending all of our activities until the virus is gone. He posed the following questions:

• How do we get back to our way of living?
• How do we get back to the workplace?
• How do we get kids back to school?
• How do we drop kids off at daycare and how do we travel?
• How do we get into airports and on the airplanes and live with the virus expecting that the virus is with us?
• What are all the things that we’re doing to stay safe and clean and healthy and make that experience like it always has been up until now?

Hotelling added that as passengers go through the travel experience, American Airlines will address issues such as face coverings, temperature checks, making sure its team members can take time off even if they have used up all their vacation, and, finally, have a discussion of how to ensure a clean airplane.

Hotelling presented the various initiatives, beginning with the security checkpoint. Some of what American Airlines is doing includes significant enhanced cleaning at their kiosks, ticket counters, and baggage service offices. The airline is trying to go as touchless as possible, but where customers still do need to touch, many of their devices are getting much-enhanced cleaning. He added that there has been much talk about the plexiglass shields at ticket counters and other service counters. These shields are already in place at most of American Airlines’ airports. Now the airline is trying to spread out its agents and close kiosks and ticket counters to the extent possible, so that it can maintain social distancing from agents at the ticket counters. He believes that, universally across the airlines, airlines are now requiring face coverings, are checking the temperatures of most airport employees, and are providing hand-sanitizing stations where possible.

Hotelling added that once passengers get through the ticketing process and the TSA checkpoints and arrive at the gate and boarding area, measures such as expanded cleaning, additional plexiglass shields, hand-sanitizing stations, adequate social distancing space, and use of personal phones to scan boarding passes will apply. Hotelling stated that they are allowing customers to scan their own paper tickets now and that these are the little things they are changing to try to make the processing of passengers more touchless. “Finally, and
most importantly,” he added, “is to travel with confidence on our planes.” Hotelling said that many airlines are now doing some sort of spraying to clean the plane, such as the electrostatic spraying that American is using.

Hotelling spoke about the HEPA filters on board the aircraft and the fact that people think that they are breathing the same air over several hours on an aircraft, which is not true. Hotelling said that it is important to communicate that the air in the cabin is refreshed every few minutes. They are also deep cleaning all high-touch surfaces, will be handing out hand sanitizers, and making face masks available to anybody who does not have one or wants additional supplies. They are also limiting or changing their food and drink service depending on the length of the flight. He added that there are minimal changes on short-haul flights and, on longer flights, there will be limited service that has fewer touch points and changes on fully catered flights such as meal boxes.

Boyett began by providing a lens into what Southwest Airlines is doing. He stressed that everyone needs to come together as an industry and that it is critically important that those in the industry seek solutions in a concerted fashion. He added that, with the different economics and networks, with other airlines facing challenges in terms of long-haul international wide-body aircraft, which Southwest does not have, they have issues with the way they turn their aircraft that cause challenges for them when it comes to cleaning. They also have issues that may be pluses or minuses regarding their open seating policy, which is different from other airlines.

Boyett mentioned that there are tactical issues, such as dealing with masks and seating, but also emotional aspects, such as feelings of disappointment and feelings of gratefulness to be flying again, along with frustrations and short tempers. He stated that it is important to address the objective concerns of passengers, as well as their emotional needs so that people are comfortable with flying again.

He continued that Southwest has added the “Southwest Promise,” which provides assurance to their customers that planes and airports are sanitized. Southwest wants customers to feel comfortable that there is going to be space available throughout the customer journey. He added that there are changes in onboard amenities in addition to customer and employee screening with temperature checks and, potentially, testing and contact-tracing concepts. He stressed his focus was about what they can control.

Boyett reiterated, “This is a collaborative effort across many different parties, and screening is one of those that must be handled delicately and in close collaboration with government regulators and public health.”

Boyett discussed HEPA air filters and electrostatic spraying, which are some of the key areas that customers want to know more about because they are not aware of the ways they can be protected from poor air quality. It is important to convey that all of the similar technology being used is safe and proven. Southwest wants to make sure that people understand that air filters can filter down to three-tenths of a micron and that air is circulated 20 to 30 times per hour.
He added that, as indicated by Fischhoff, it is important to keep informing customers in a way they can consume, understand, and believe. Boyett touched on how challenging Southwest’s open seating policy is but said it allows for more flexibility when it comes to seating, such as families who want to sit together. They are, however, capping the number of seats they are selling through July to ensure that there is space on board the aircraft. Other airlines are also implementing this, including American Airlines, which has a practice in place to help make sure that some of the middle seats are available as well.

Boyett stated that they were able to restart snack and beverage service on board. They are looking at testing and feedback on how customers are accepting it and how flight attendants are delivering it. They have heard from their flight attendants that there is an earnest desire to get back to serving and that they are excited to be able to resume food and beverage service as a small gesture to their customers.

Hamm-Niebruegge asked how Southwest was addressing the impact of the time for additional cleaning after each flight with its short turn times.

Boyett responded that, because their schedule is currently reduced, they have time to complete a thorough cleaning of every aircraft in between every flight. He added that they trained 17,000 employees in under 2 weeks to be certified to complete those cleanings. He added that as they look farther out, they see the schedule tightening as they start to add more flights. He acknowledged that they will need to continue adapting and modifying their schedule to be able to accommodate the additional cleaning, as they believe that it is critically important for their customers. He stressed the importance of customers’ confidence in Southwest and flying in general.

Hotelling echoed Boyett’s sentiments and added that the current limited operations allow them to get things done a little easier. He added that, as the airlines continue to add flights back, they will have to be aware of policies to accommodate and maintain social distancing as more people are waiting in hold rooms and in queues; the airlines will also have to limit wait times at ticket counters backed up due to limited [airline] staffing. These are the types of things they are still working through. He added that they all have the same questions and concerns about what they still need to tackle.

Other Stakeholders—Challenges of Social Distancing and Touchless Environment
Joe Thornton, *HMSHost*
Rob Mitchell, *Uber*
Daniel Price, *Transportation Security Agency*

Rhonda Hamm-Niebruegge introduced the last group of stakeholders: Joe Thornton, Executive Vice President and Chief Operating Officer, HMSHost; Rob Mitchell, Business Development | Global Airport Partnerships, Uber; and Daniel Price, Policy Coordination
Manager, TSA. Hamm-Niebruegge emphasized that at airports, there is also a range of additional services from concessionaires to transportation companies to TSA. Several perspectives were presented: food, beverage, and retail vendors; a ground transportation operator; and TSA, which is responsible for the airport screening checkpoints. Each presented the initial impact his organization experienced in moving from robust activity to a diminished demand and reduced capacity, stressing new initiatives, including increased cleanliness and additional protocols in place to help in reducing the spread of the virus and making it safer for travelers and employees.

Thornton began by saying, “It is interesting that we all have this past experience and yet we’re dealing with a situation that no one in this webinar can say they’ve actually dealt with before, which is striking.” He stated that he is new to HMSHost, having only begun in early March, and his second day on the job was when Italy shut down. This is relevant, as HMSHost’s parent company, Autogrill, is based in Milan. They saw the effects of the pandemic firsthand, which gave them a preview of what was to come, similar to the virus spread in China and other countries.

Thornton described HMSHost’s growth plan, which includes how the company is refitting its restaurants for the future. He stated that they are operating about 1,600 food and beverage locations across North America and working with 300 brands across their portfolio. At airports, they are currently operating at 320 locations, indicating that about 80% of their restaurants are closed. He added that even more sobering is that, at their lowest point, their sales were down by 97%. He noted that some of his partners, particularly those with streetside businesses, also cited challenges, as their sales were down by 60% to 65%; however, many of them can bolster their business with drive-through, mobile orders, and other forms of delivery to the consumer. He added that in the airport, they are limited by the lack of flights and passengers, which is troubling. He expressed that it was heartbreaking that within the first week at HMSHost, he was already seeing the effects, and they made a very tough decision to begin to furlough associates. For HMSHost, having about 27,000 of 31,000 associates furloughed was concerning, and it has been challenging to react to the market.

Thornton said that HMSHost has pivoted and spent a disproportionate amount of time addressing issues related to its associates. It first examined trends around making significant investments in PPE, even while losing sales and profits. He added that they view their restaurants and associates as the face of their organization and are doing everything possible to keep them safe and make an environment where they are still proud to work for HMSHost.

Additionally, he mentioned that HMSHost has stayed in touch with its 27,000 furloughed associates and has built a website that is specifically for them. The website is continually updated to provide information about the tools that are available, such as those that guide them in getting unemployment, other resources available to them, and changes that HMSHost is working through. These changes are in the areas of safety and security and decisions about when they will be asked to come back from furlough.
Thornton added that HMSHost’s marketing communications team made a conscious effort early on to set up a hotline to talk to its associates and send out a dedicated e-mail to talk about the questions that continue to come up. Each week, the company is trying to navigate a moving target of what it knows, based on state and municipal regulations. HMSHost wanted to have a way to capture those questions as they came up and communicate responses to its associates through the website, e-mail, and the phone line.

Thornton described how HMSHost has looked at this crisis from when it was conducting business as usual on March 10—a defining date for the company, as its parent company was impacted and started the chain reaction of events here in the United States and in North America overall. He added that they saw an acceleration in restaurant closures in the second week of March, so they knew that, in addition to furloughs, restaurants also needed to shutter. The company closed 800 restaurants almost overnight and then another 380 the following week. There was a period of about 7 weeks when sales hit a plateau and then a period when the company hit what it believed was the bottom. Thornton stated that consumer behavior is changing, driven by the shutdowns, but even in areas where they were not completely shut down, there was a drop-off. Hitting the bottom also gave them time to think while they were operating restaurants about how they should start thinking about the recovery plan and what would happen next. He stated that one of those defining moments for them was May 4, 2020, when the company put together its growth plan. He stated that they were very proud to share this document with all of their business partners and airport executives across the United States. The plan was developed in a partnership between Thornton and his colleague, Darrell Bennett, Vice President of Business Development; along with Bennett’s team, they facilitated a recovery plan through conversations with the airport about how they were doing it and, more importantly, how they would partner together through this journey.

Thornton stated that they are building a strategic growth plan to start to open restaurants on the basis of what should be different in the new environment. He stated that considering the different level of shutdown that they have experienced, they are almost building a brand new company. Thus, they are discussing what has to look different.

Thornton then elaborated on the HMSHost document “Growth Plan, The Way Forward,” which details the three following dimensions: how restaurants are opening, the safety issues, and the guest experience. He added that when they started to think about the strategic growth plan, the team had to think differently. Today, HMSHost is an organization of over 320 restaurants, and it has the experience to grow back to over 1,600 restaurants and beyond. Thornton said “We’ve done it before, we know that we can do it again. However, we will likely do it differently than before.”

He mentioned their strategic priorities, including how to grow the restaurants and their service execution. They must understand that they must be prepared for the new service environment and address how to grow their people professionally in the new environment.

Thornton said he is concerned not just about when the associates can return as HMSHost grows back its business, but also about how the associates have been doing personally.
People have gone through a lot of hardship over the past 2½ to 3 months, and some of them are aware of the hardships and some of them are not. He added that they do not want to assume that these people are coming back, will be highly engaged, healthy, and that everything in their household is fine. He stressed that it is important to be thoughtful about engagement and growing their people professionally. Thornton added that they are going to spend time thinking about their approach to restaurants. As they are reengaging their associates, they are thinking about service execution and how best to reinvent their operations using strategic initiatives and performance metrics. He added, “Coupled with the amazing experience of their associates at HMSHost, they will almost have to unlearn the old ways and methods so that they can learn something new in the environment ahead, but [this] will be an exciting time given the challenges.”

Thornton said that at the end of the day, HMSHost wants to be there for travelers to meet their dining needs and do so as safely as possible. Understanding that it may transact differently with them in the future, HMSHost still knows that it is a viable part of the traveling journey for the airport consumer, both the leisure traveler and the business traveler. However, one of the things that HMSHost continues to message is that it will be slow and methodical about its growth to get it right.

Thornton added that HMSHost is responding to its partners in the airline business and watching how enplanements grow back to consider what that volume means for them and their restaurants and whether they are operating in the right airport locations. He felt that they are learning as they respond to opening restaurants in Charlotte to meet the demand there due to an uptick in activity.

“Overall,” he added, “we want to be careful to a degree because I think we’re all facing this unknown future of ‘Hey, what if there is a second wave? What if there is another shutdown?’ We want to make decisions that we could live with potentially through that type of experience as well.”

Lastly, Thornton stated that HMSHost is approaching everything differently while understanding that, although past knowledge is great, it is really not a blueprint for success going forward. He added that

Many of you could probably attest that you also have to challenge your own cultural norms as you go forward into this new environment. So as challenging as it is, we’re very encouraged, we’re very determined to be successful again in this space, and we are committed to doing it with the airlines and airport partners; the consumer is expecting something different and we’re all committed to delivering that.

Hamm-Niebruegge thanked Thornton and asked Rob Mitchell to share his thoughts on the impact and what Uber is doing to instill consumer confidence. Mitchell began by stating that it is really about how to move forward together and prepare for the recovery of air travel. He agreed with Lenfert and said, “It is shocking to think 3 months ago that we would be where we are now. And needless to say, it’s been a period of unprecedented trauma on the travel industry, and it has put incredible stress on each of us, our families and loved ones, colleagues, and our organizations.” He added that it is unlike almost any other large-
scale crisis he recalled in recent modern history, and he said that “the phrase ‘We’re in this together’ isn’t cliché, but it’s actually the unifying idea that will help us recover faster.”

Mitchell stated that in his view, each of us has a role to play in our organizations by keeping each other safe while making the necessary changes to prepare for that new normal whenever it comes. He added that over the past 2 months, Uber has been urging riders to stay home for their safety and the safety of drivers, who continue to make essential trips. Uber operates in over 600 airports and 65 countries and has been sending this consistent message. Mitchell stated that during the initial days and weeks of the emerging crisis, Uber responded quickly to promote social distancing by, for example, temporarily suspending UberPool, which is its shared ride product, so that strangers would not be able to share a vehicle with each other in all U.S. cities. In addition, the company suspended Uber Copter (the company’s helicopter service) in New York City and its pin dispatch system at airports.

Further, he added that at a company level, Uber designated a 24/7 team to support health authorities around the world and their response to the epidemic. It also suspended, as requested, accounts of riders and drivers who may have been exposed to the virus. In addition, Uber has made a significant financial commitment and allocated $50 million for the purchase of PPE for drivers and delivery people globally. Mitchell indicated that that Uber has distributed about 30 million masks and has also committed to financial assistance for drivers. This assistance has provided $20 million to nearly 50,000 drivers and delivery people who have either been diagnosed with COVID-19 or asked to self-isolate for up to 14 days due to a preexisting condition. He added, “But as cities begin to reopen and people start moving again, we want riders and drivers to know what they can expect when they’re ready to take that second first trip.”

Mitchell said he believed the common theme he had heard from all of the day’s speakers is a shared belief that it is critical that we help travelers feel comfortable again and create a safe environment for them to come back to the airport. Mitchell outlined three principles that have guided Uber’s planning and can help inform others:

- First is creating a safe, predictable, and consistent experience, no matter the airport or what segment of a passenger’s journey. In air travel, it is critical that travelers feel that the entire end-to-end journey is safe and that each of the stakeholders in the airport ecosystem has coordinated actions, which is really important.
- Second is accelerating the move to more contactless and touchless technologies. He said, “And, I think, we certainly expect this to continue as a company built to enable people to get a ride at the touch of a button from their own phone. We’re well positioned to help here.”
- Third is increasing speed and reliability in getting passengers to their destinations, which is going to be critical to instilling a sense of control and comfort for travelers as they get back on the road. He added that this all matters as it relates to Uber and TNCs because a large share of passengers at most large U.S. airports travel to and from the airports using TNCs. Specifically, at LAX, prior to COVID-19, more than 30% of vehicles entering the terminal areas were TNCs. While Uber does not serve every passenger to and from airports, all airport travelers need some form of ground transportation, and
this is a key part of the journey as more are returning to airports in the United States and around the world.

Next, Mitchell discussed some of the measures that Uber has implemented over the past few weeks to enhance safety for riders and drivers and opportunities to improve the pickup and drop-off experience in airports. Over the past 2 months, the company’s tech and safety teams have been building new products and protocols to promote safety while everyone uses its app. It built a new suite of tools and videos in the app to inform riders and drivers how to stay safe that includes advice of health experts who have been working with company leadership. As of May 18, all riders and drivers will now be asked to confirm via a “go online checklist” that they have taken safety measures and are wearing a mask or a face covering. Effective mid-May, Uber’s technology will verify if a driver is wearing a mask by asking them to take a selfie prior to logging into the app. If they are not wearing a mask at that time, they will not be able to log in to accept trips. Uber currently has this policy in place in the United States, Canada, India, and most of Europe and Latin America through at least the end of June. At that time, it will reassess each market based on health authority guidance.

As for riders, Uber is asking them to use only the back seat of vehicles and has reduced the number of passengers eligible for an UberX ride from four to three. Mitchell said that for riders and drivers, accountability is key to ensuring everyone’s safety. Therefore, Uber is encouraging drivers to cancel a trip, without penalty, if they do not feel safe. This includes if a rider is not wearing a face covering. Likewise, if a driver shows up without a mask, the rider can cancel the trip without a penalty. Both drivers and riders are encouraged to report issues to Uber via the app. Mitchell stated that there has always been a two-way feedback system that has long helped ensure both riders and drivers uphold certain standards on issues like vehicle quality, navigation, and speeding. He said, “Now we’re adding new options for feedback that include having no face cover or mask, and drivers or riders who repeatedly violate mask policies risk losing access to the Uber app.”

Lastly, Mitchell touched on the passenger journey into and out of airport. As Uber riders are arriving at the airport, they are going to want to know they are in exactly the right place and they have a place to clean their hands. He indicated that they [Uber] can work directly with airports to make sure they are setting up optimal drop-off locations to minimize walk times. He added that airports are deploying sanitation stations and expressed that drop-off locations should be considered as well for the sanitation stations.

Going forward, as travel volumes resume, there is work that Uber can do to promote social distancing and create a more dynamic distribution of drop-off locations based on security wait times at various checkpoints. As riders are making their way to pickup locations, they will want to get there as seamlessly and easily as possible. Wayfinding is even more important, to make sure that people are not lost and stuck in locations that are making them anxious. He added that it will help to have sanitization stations and safety checklists posted, which will help instill a sense of coordination across all stakeholders in the journey.
Mitchell added that they also want to make sure that they are leveraging [the] technology that they have to keep reliability high and wait times low, which will help reduce customer dwell time and prevent large numbers congregating in constrained locations. They will work with airports individually to make sure that they have technology configured to operate optimally. For airports with consolidated pickup points, he thought this might be a good opportunity to consider distributing those points out as volume returns, thus ensuring that too many people do not end up in one location.

In wrapping up, Mitchell stated Uber has had many one-on-one conversations with airports over the past few months stressing the following themes:

- Airports are looking to reduce costs and preserve cash in light of their significant decline in revenue.
- Uber is implementing new measures to keep everyone at the airport safe. Uber feels it can help by working with transit agencies to, for example, provide transportation services as those agencies have reduced routes and services. This could help airports, given many run services for passengers and employees to and from airport campuses. They are willing to work together to help travelers feel confident about coming back to the airport for that second first trip.

Hamm-Niebruegge introduced Daniel Price, stating that TSA is an integral part of the airport experience, and added that while TSA had its screening process down pretty well, it did not have a lot of lines or challenges. Price offered some themes and key elements of what TSA has been doing. He reiterated what others had said about the drop in volume and how that had affected operations, including at TSA. He stated there has been a significant drop in volume, but TSA is continuing to provide an effective transportation security element during these times. He indicated that their first focus is on the health and well-being of their employees. Price emphasized that the agency felt it was important to protect them and also offer leave for those who were infected with the virus or those who were caring for someone who is infected. He stated that, first, they have prioritized providing PPE and sanitizing supplies. TSA has made it mandatory for its transportation security officers at the checkpoint to wear PPE, which includes surgical masks, gloves, and even eyewear for some. They also have sanitizing solutions available at the checkpoints. There are health and wellness programs that officers can use and have offered some safety leave with flexibility to ensure that those who do not need to come to the airport can take time off if needed.

Price also emphasized a safe environment through increased sanitization efforts for passengers going through checkpoints. TSA recently received extra funding from Congress for some of these efforts. He stated that, in regard to social distancing, while TSA is challenged by the limitation in the footprint of the checkpoint areas and is concerned that the queue could extend into the other public areas, TSA is working with its airport partners. He emphasized that it would be difficult to get through this without those partners and cooperative relationships.
Price added that there are opportunities to develop new policies and procedures and to make technological advancements to reduce contact and allow for touchless screening. He stated that, while TSA explores those options as part of a screening modernization effort, there will be some shielding installed at the ticket document checker (TDC) locations. TSA is trying to standardize the TDCs more broadly in the near future. As part of TSA’s operational efforts, people will be spread out more. On the technology side, TSA is also looking at screening modernization through the roll out of credentialing authentication technology (CAT). CAT is similar to the boarding pass scanner, as it allows passengers to input their documents, similar to how they use their mobile phones for a boarding pass. TSA is also taking advantage of the reduced throughput to look at other efforts and partnerships with international colleagues who have already started to roll out efforts.

Price stated that TSA is trying to streamline some of the acquisition and procurement efforts by looking for different types of technology that could provide a better experience for passengers. It hopes to get this technology through the proof-of-concept phase with its transportation security integration facility. Price added that there will be signs at the airports about healthier checkpoints and new procedures as people are queueing and moving through the lanes and that TSA will be working with airports to get those posted.

Hamm-Niebruegge thanked all of the speakers.
Questions & Answers/Wrap-Up

Rhonda Hamm-Niebruegge reminded everyone that the presentations are available at ACRP Insight Event Flight Plan to Recovery | ACRP.

She stated that the participants heard a lot of consistency in what people are doing and what the world is learning. Whether this is short-term or long-term, we are all adapting.

She started by asking Winsome Lenfert, “What would be the single best entity, agency, or association to pull all this together and to have both the compliance mandates and the best practices?”

Lenfert responded that in addition to all the great information shared, there is a piece that was not part of the wrap-up: That for individual airport operators, FAA would be looking at several different working groups, both with her colleagues and through other federal agencies. These groups are looking at some of the best practices that they can recommend for the industry. She added that much of that will depend on their partners, the Department of Homeland Security and the Department of Health and Human Services, both of which primarily have roles for security and health determinations and will be relied on to issue guidance. She added that different organizations and agencies, such as TSA and FAA, are going to take the suggestions and responses from this meeting and share them with their different work streams. She stated that since many airport operators are owned locally by state, county, and municipalities, each one also has its own health department and requirements. Many of them are following the requirements of the CDC, but they also have their local health requirements. She referred to one of the speakers who talked earlier about how it is very different from state to state as to what the requirements are and how it is necessary to strike that balance with the federal government in the role it plays. But it is also necessary to understand that local health entities have a role to play. Lenfert stated that she would encourage airport sponsors to have a dialogue with their local health organizations and foster those relationships and continue to share the information from this webinar.

Hamm-Niebruegge asked Kurt Hotelling, “Has American or any of the airlines done any customer surveys to understand what the passengers are saying will be a confidence level for them?”

Hotelling responded that they have done customer surveys weekly, and while many of the results were of the things that has been discussed today (e.g., aircraft cleaning and other cleaning procedures being taken), there seems to be a trend in the right direction toward a more confident place. They are trying to shape their policies around some of the results that they see from those surveys.

Hamm-Niebruegge asked, “A lot of different people talked about tech savvy and some of the changes from a touchless environment. What about people who aren’t tech savvy, such
as the generation of older travelers or someone that has just not gotten into the world of being tech savvy these days? Do you think it's going to be a larger challenge for them to travel, and, if so, are there things to also think about for that population?”

**Hotelling** responded that they are trying to promote and allow things to happen that are more touchless than they have been in the past. He added that with a paper boarding pass, to go through the boarding process, the agent would typically take it out of a passenger’s hand and place it on the scanner. He stated that they are now allowing customers to do that themselves; while it is a very small thing, it is the little things that enable change to happen. However, this is not mandatory or universal. He stated that airlines fully recognize that people are still going to have to use their kiosks and are still going to have to talk to a ticket agent at the ticket counter or to gate agent, so all of those services are still possible and available. It is perfectly fine for people who fly once a year, do not understand the processes, and do not have the apps on their phone to do it themselves. They are just trying to enable those who are more tech savvy to have touchless options. He added that agents will always be there, as with every airline, and will always have all of the processes that allow the non-tech-savvy person to travel just as seamlessly as anybody else.

**Joe Thornton** responded that he believes there is a distinction between technology and automation. With changes in technology, things like Quick Response (QR) codes are going to be more prevalent than ever before. While it was in the suite of changes for people, it has moved to the front of the queue, certainly for concessionaires. There will still be the live associates for interaction versus automation. He described how when grocery stores went to self-checkout, they still have had people staffing check-out lanes. But at some point, stores will move to full automation, which is a journey that will be seen over time. Thornton agreed with **Hotelling** and believed there will be some changes, but not as dramatically and not right away, and they will watch the views of the customer.

**Hamm-Niebruegge** asked Thornton, “How are you planning to stagger your reopening? Is it purely based on the volume of passengers or is it based on something within the airport?”

**Thornton** responded that the short answer is “carefully.” He added that there are a number of different metrics, and they have an actual process for building a business case. As they are just reopening the restaurants they had before, they are also looking at enplanements and TSA data as indicators of volume of passengers. They are also examining the proximity of their restaurants to their other locations in different zones, terminals, and concourses at the airports. Finally, they are looking at where planes are being directed, based on the airline’s flow and their projections and whether their competitors are open or not. He stated that there are many things that would go into the mix but added that they are not treating any of their restaurants as carte blanche to say, “Hey, let’s just open it back up. We know that we need to retrofit them to some degree.” He added that they are also putting them through the rigors, since the restaurant had not been opened before, and making sure that they use really sound data. He reiterated his earlier point: “Knowing that we can stay at this kind of very low and very slow recovery rate for a while and/or the potential of a shutdown to where we have to kind of reconsider what we have.”
Hamm-Niebruegge asked, "They heard the coronavirus has actually been around for many years. One, is that true, and, if so, is this just a different strain or why are we all so surprised by COVID-19?"

Hilary Godwin responded,

Yes there are other coronaviruses that have been circulating for a long time, including one that causes the common cold, but those are different strains of coronavirus. We don’t know how long a lot of these viruses have been around. What we’re seeing is them coming from animal populations and transferring over into humans. It’s possible that it’s been around in animals for a while and just finally made its leap over to people. In the past, viruses have crossed over to people but just not spread as much. We don’t have any evidence at this point that it’s been circulating in humans and human-to-human transmission before the late part of last year, 2019.

Hamm-Niebruegge asked a follow-up question to both of the doctors: “Trying to do the tracing and tracking, knowing how challenging that can be, is that something that we should be spending our time on when there seems to be a lot of other things that we could be doing? Is that a critical component, that we try to do the tracing of how each individual [may have had] contact with it?”

Godwin responded,

We do have good evidence to support contacting people who have been in close proximity for an extended period of time to an individual who is known to be infected. As long as they then self-isolate while they’re in the infectious period, it is an effective strategy, but it is dependent upon people actually being willing to quarantine themselves after they’ve been contacted. But that being said, there are recent studies by the Institute for Disease Modeling in Seattle that have looked explicitly at that issue of if we were to increase the amount of movement in the population, which is one of the indicators of spread of COVID, how much could we offset that by doing contact tracing? What they see is that effective contact tracing, where people actually follow up by quarantining themselves if they have been identified as being in close contact, actually can really help. So I think particularly as we’re moving from this period of really constrained social interactions, we all want to move to something that looks a little bit more like normal.

She added that, "Contact tracing and the isolation and quarantine of individuals who are known either to have COVID or to be in close contact with people who are COVID positive—it’s going to be really important.

Hamm-Niebruegge posed a question to TSA: "You mentioned some rollouts of improvements at the checkpoints. What is the time frame for the rollout of those new ideas that you talked about?"

Daniel Price responded, “For some of the nontechnical ones, the protective equipment, the shielding, the increased sanitation of the bins and the checkpoint itself—that is happening now.” He added,
You will see more shielding in place at the TDC very soon. So, those efforts are on the way. The timeline for the rollout of other technologies—the CAT for one—is going to be happening between now and toward the end of the year and then on a much faster basis. Obviously, we had to acquire the machines and then we have to test them, put them in place, and make sure that they’re working. The improvements will be seen now, and then you’ll see an uptick and additional efforts throughout the end of the year.

He added, “Because [of] some of those longer lead efforts—maybe a different design on the checkpoint or an update to how the checkpoint is configured—that’s a much longer effort, and we can try to get a head start on it, but I think that will be a number of years in the making.”

Hamm-Niebruegge asked, “With the intense cleaning effort that’s being done, is more waste being generated? And, if so, does that have to be disposed of in a particular manner?”

Godwin responded that “the amount of waste generated really depends upon the process; so that electrostatic frame should generate too much weight, but obviously doing wipe downs would create more waste. I’m not sure how they dispose of that.”

Hamm-Niebruegge added, “Talking from an airport perspective, obviously we are doing a lot of additional cleaning and wipe downs. We haven’t been instructed nor have we sent a recommendation or a guideline that says it’s treated as any sort of a hazardous matter or waste product any different than what we’re doing today.” She asked Hotelling, “As Boeing announced massive layoffs, do you believe that there will be enough workers or the demand for aviation is matching what the airplane industry is going to be able to produce in the coming years?”

Hotelling responded,

That question is asking me to speculate on Boeing’s future. Either way . . . in general, it’s a long-term industry, and a lot of us have parked older aircraft. But we constantly renew, and younger fleets are more energy efficient and typically have better seating configurations. While it would be inappropriate for me to speculate on Boeing, inevitably, just like every industry, we have to replace our aircraft over time. It’s hard to imagine a world where Boeing is not a part of that.

He added that nobody should read anything into his comments, as he indicated that he is out of his element on this.

Hamm-Niebruegge asked another question of Hotelling. “What is the airline’s expectation regarding the impact on ticket fares due to the reduced capacity and the reduced number of passengers? Do you see that it’s going up? Where do you think this will have a longer term impact on air pricing?”

Hotelling responded that,

as we went through this, there have been a lot of fare sales, and . . . all the airlines are . . . experimenting a little bit with different buckets of fares. I think they’re experimenting with
those to see what sticks. Obviously, we need to generate air travel, so I would imagine from
time to time that we will continue to see attractive fares out there to generate demand.
Ultimately, the success of our companies is not based on our survival on fire-sale prices
long term. Longer term, I would expect this is going to be about supply and demand, and
that’s what ultimately dictates what the fare prices are, so I think it probably course
corrects over time.

He added that this was not his area of expertise.

**Hamm-Niebruegge** asked, “As we see the industry returning and as we see the need for
more restaurants to be open or more transportation options available for those who
choose not to have a personal vehicle or drive to the airport, are you concerned that you
won’t see employees returning to work, that even though unemployment is obviously high
right now, that the concerns just may be too overwhelming for some individuals?”

**Thornton** responded,

It’s an interesting question, because the answer will probably change in 30 to 45 days…. Today we certainly have anecdotal examples of calling people back and not everyone wants
to come back to work. Much of that is driven by the subsidy—the $600 per week [that
people receiving unemployment are eligible for] that goes through July 31. [For] those who
did get the one-time stimulus and who have already been getting unemployment [who are
at a certain] income level, it makes more sense to not go back to work. We’ve heard that
play out from our associates for the past few weeks…. The good news is that that we don’t
have a lot of demand for a lot of restaurants today, and we’re methodical about opening. At
the point that that accelerates, we believe, at least timing-wise, it’s going to match up. There
are many discussions in Congress, in that there will not be an extension to that $600 a week
stimulus. There was discussion about a one-time bonus to encourage people [to] return to
work. I think we’re going to have this place where those two paths cross, where we have
more demand needed for people. Now people are ready to come back to work. I believe for
our segment, that’s what we’re going to see.”

**Hamm-Niebruegge** asked Mitchell for his thoughts on the drivers within the TNC world
and if he thought that it is going to be a challenge to regain those drivers.

**Mitchell** responded that

if you look at the sequence of events over the last couple of months, Uber is this
marketplace that connects riders and drivers, and the reliability for riders depends on
having enough drivers available to fulfill those rides. What we saw in the very early days of
the impact on travel at airports was an oversupply situation, meaning we had many more
drivers coming to the airport for a dwindling number of rider requests. In the late March
time frame, that trend abruptly changed and coincided with states and cities issuing stay-at-
home orders. I think what you said, the cause of that was obviously folks following the
guidance and staying at home. There was also the reality that there just weren’t as many
trips to get in airports. We continue in that situation right now. As a result, we have seen
wait times for trips increase, and we have some mechanisms in place to keep reliability as
high as possible. But we’re continuing to keep a close eye on that.
He added,

Looking forward, I’d say in a typical environment, we would expect that as unemployment increases, there are probably more people that are going to be looking for other means of income. Driving on the platform is a good way to do that so I suspect, as we start to see stay-at-home orders relax, this trend will likely shift, but it’s hard to know exactly when that’s going to occur. Generally we’re not terribly concerned about that, but for the immediate term, I think we are seeing a challenge and it will depend on either how smooth or bumpy that recovery is.

Hamm-Niebruegge noted that Mitchell had said that many airports have a particular pickup area that used to be very congested and asked, “Is there something from your perspective that can be done to ensure that there is not bunching or gathering of people in these pickup areas?”

Mitchell responded that he believed that in the immediate term, that is probably not a poignant issue, given travel is still down anywhere between 90% and 95% in most places in the United States. He added that, as the United States gets back to 30%, 40%, 50% of previous levels of aviation traffic, it could become an issue at certain times of the day or days of the week. Also, every airport is different, as it depends on roadway configuration. From a technology perspective, it is very easy to work directly with an airport and identify additional pickup locations, and when riders open the app, they can change it to different locations. TNCs can also encourage a different location, depending on the time of day, for example, late at night. In addition, the TNCs have also encouraged passengers arriving at busy times to go to the departures level for pickup if there are not many flights leaving at that time.

Hamm-Niebruegge asked,

At what point do airports run out of the ability to have the 6-foot distancing? Some airports have more space than others, especially in their ticketing areas and lobby areas, which are very constrained. Many of the lobbies . . . have been developed or changed over time because the check-in process changed. Thus, the lobbies are not deep, and if there [are] a lot of customers in line, what is the reality of that social distancing requirement? It can be anywhere from once someone gets to a 40% or 50% level that capacity is no longer an opportunity, all the way up to 75% or 80% understanding that many airports have modeled. But this is very similar to the question on spacing on airplanes. At what point do some of those become unrealistic?

She believed that this will be an ongoing challenge in the coming months. Hamm-Niebruegge stated, “That’s our livelihood. That’s how we all survive in this business, and this industry is used to challenges and we always come forward for them.” She asked one last question: “What policy or policy position can the federal government take that would help this industry, come back that we haven’t yet seen? Is there a particular policy that we haven’t seen yet that we feel should be forthcoming or that would really help this industry regain your level of trust?”
Hotelling stated that while he has heard this for American, he believed what would make everybody feel comfortable getting on an airplane is that those that surround you had passed a temperature check. He added that it would be difficult for airlines to take that on because of the way people check in, adding that not everybody goes to the ticket counter and people go through security and then head to a concessionaire. He suggested that it would be better if it was a federal mandate and added that he believed it would boost confidence for those in the airport and getting on an airplane.

Thornton responded that that is one of their biggest challenges and said, “I think it speaks for many of us in this industry . . . we’re trying to legislate behavior,” and added that while they would all like financial health, as you look at airports across the United States, the people [who are] coming to the airport are going to mirror the communities that they are flying out of and into. While there are people in the United States who do not believe there is a pandemic and people who are afraid to fly already, there will be people that do have to get from Point A to Point B. He added that they can be sitting next to each other on the plane, which is a challenge. He added that HMSHost and the industry are all working with policy, social-distancing stickers, and all of their tool kits.

Hamm-Niebruegge concluded that while this industry is going to keep changing over the next couple of months, and certainly with the pent-up demand of questions and in having to ensure the public that it is safe to travel again, there will likely be an opportunity to expand on this.

Information was provided about a post-event survey (Appendix C). The information on this event can be found on the ACRP website at http://www.trb.org/ACRP/ACRP-Insight-Event-COVID19.aspx.
APPENDIX A: Program Agenda
COVID-19 has dramatically affected domestic and international airports and travel industries. Their challenges are shared by all partners working to ensure safety, public confidence, and financial sustainability in the aviation industry.

Join distinguished industry thought leaders from the airport ecosystem, including governmental, airport, airline, and other stakeholders, to discuss current and ongoing practices in restoring traveler confidence in air travel. Presentations will focus on strategies and case studies in safety, operations, public health, and financial sustainability to help airports navigate the new normal.

Featured speakers:

- Rhonda Hamm-Niebruegge, Airport Director, St. Louis Lambert International Airport and Chair, ACRP Oversight Committee
- Roger Dow, President and CEO, U.S. Travel Association
- Joseph Lopano, Chief Executive Officer, Tampa International Airport
- Andrew Boyett, Senior Manager, Customer Experience, Southwest Airlines

ACRP welcomes all airport industry stakeholders to this event. Speakers will be available to answer participant questions after presentations.

Register at: ACRPInsightEventZoom
Flight Plan to Recovery: Preparing Airports and Their Business Partners for the Return of the Flying Public
May 28, 2020 via Zoom

1:00 – 1:15 PM ET
WELCOME
Neil Pedersen, Executive Director, TRB
Moderator: Rhonda Hamm-Niebruegge, Airport Director, St. Louis Lambert International Airport and Chair, ACRP Oversight Committee

1:15 – 1:30 PM ET
FAA/US DOT
An Overview of What We Are Doing to Ensure Consistency
Winsome Lenfert, Deputy Associate Administrator of Airports, Federal Aviation Administration

1:30 – 2:10 PM ET
HEALTH UPDATE
Health, Safety, and Travel during the COVID-19 Pandemic
Dr. Hilary Godwin, Dean, University of Washington, School of Public Health
Passenger Risk Perception, Confidence and Behavior
Dr. Baruch Fischhoff, Howard Heinz University Professor, Carnegie Mellon University

2:10 – 2:25 PM ET
OVERTURE
An Industry Overview of the New Normal to Ensure the Health and Safety of Travelers
Roger Dow, President & CEO, U.S. Travel Association

2:25 – 4:00 PM ET
AIRPORT AND STAKEHOLDER 30-MINUTE CASE STUDIES AND BEST PRACTICES
Airports—Executive-Level Discussion of Current and Future Plans
Lance Lyttle, Managing Director, Seattle-Tacoma International Airport
Joseph Lopano, Chief Executive Officer, Tampa International Airport

Airlines—Highlights of Plans in Place
Kirk Hotelling, Vice President Airport Affairs and Facilities, American Airlines
Andrew Boyett, Senior Manager, Customer Experience, Southwest Airlines

Other Stakeholders—Challenges of Social Distancing and Touchless Environment
Joe Thornton, Chief Operating Officer, HMSHost
Rob Mitchell, Business Development and Global Airport Partnerships, Uber
Daniel Price, Policy Coordination Manager, Strategy, Policy Coordination & Innovation, TSA

4:00 – 4:35 PM ET
Q&A

4:35 – 5:00 PM ET
NEXT STEPS
Identifying Areas of Research and Topics for Further Discussion

Airport Cooperative Research Program (ACRP) Insight Events bring together airport industry leaders, subject matter experts, and researchers from fields related to the event topic to explore and discuss issues and insights of significance to airport operators. These in-depth discussions are intended to bring solutions and best practices to airports as well as help identify areas of future research needs.
APPENDIX B: Speaker Biographies

Welcome and Introductory Remarks

Neil Pedersen, Executive Director, Transportation Research Board

Neil Pedersen has been Executive Director of the Transportation Research Board (TRB) since 2015. In that role he provides executive direction and leadership to TRB’s technical activities, including its annual meeting of over 13,000 transportation professionals, its more than 200 technical committees, its conferences, and its publications; its peer reviewed policy consensus studies; and its multimodal cooperative research programs. Prior to joining TRB, Neil spent 29 years at the Maryland Department of Transportation, where he served the last eight years as State Highway Administrator and Governor’s Highway Safety Representative.

Over his career, Neil has been involved in volunteer leadership roles in both TRB and the American Association of Transportation Officials (AASHTO). He chaired a number of TRB and AASHTO committees, including serving as Chair of TRB’s Executive Committee in 2011.

Rhonda Hamm-Niebruegge, Airport Director, St. Louis International Airport, Chair, ACRP Oversight Committee

Rhonda Hamm-Niebruegge has been the Director of St. Louis Lambert International Airport (STL) since January 2010. The Airport is the primary air carrier facility for the St. Louis region serving more than 14.7 million passengers annually. She is also Chairwoman of the 17-member St. Louis Airport Commission. Prior to STL, Ms. Hamm-Niebruegge logged over 25 years in aviation management positions with American Airlines, Trans World Airlines (TWA) and Ozark Air Lines; a majority of her career has been based in St. Louis, Missouri.

Ms. Hamm-Niebruegge currently serves on the National Freight Advisory Committee, an advisory board serving the U.S. Department of Transportation. She serves on the oversight committee of the Airport Cooperative Research Program. She also serves as a board member for the St. Louis Regional Chamber, the International Women’s Forum, Ranken Technical College Board and the St. Louis Civic Pride Foundation. She’s the former Chairperson of the Advisory Board of John Cook School of Business at Saint Louis University; past President of the Board Habitat for Humanity Saint Louis; and past board member of Christian Hospital (BJC HealthCare).
**FAA: Overview of Efforts to Ensure Consistency**

**Winsome Lenfert, Deputy Associate Administrator for Airports, Federal Aviation Administration**

Winsome Lenfert has been the Deputy Associate Administrator for Airports since February 2017. The Airports organization has responsibility for all programs related to airport safety and inspections, and standards for airport design, construction and operations (including international harmonization of airport standards). Each year, the office awards approximately $3.3 billion in airport grants and approves passenger facility charge collections totaling approximately $2 billion. The office is also responsible for national airport planning, as well as environmental and social requirements. The office establishes policies related to airport rates and charges, compliance with grant assurances and airport privatization.

She began her career with the FAA as an Airport Certification Safety Inspector. Since then she has held many positions with the FAA including Airport Certification/Safety Specialist in Washington, DC; Community Planner for the O'Hare Modernization Program in Chicago, Illinois; Assistant Manager of the Detroit Airport District Office in Detroit, Michigan; and both Manager of Regional Operations and Director for the Airports Division Southern Region in Atlanta, Georgia. She has a commercial pilot certificate with an instrument rating and held a Certified Flight Instructor Certificate.

**Health Update A: Health, Safety and Travel during the ongoing COVID-19 Pandemic**

**Dr. Hillary Godwin, Dean University of Washington, School of Public Health**

Dr. Hilary Godwin joined the University of Washington in 2018 as Dean of the School of Public Health. Over her career, Dr. Godwin's research has focused primarily on elucidating the molecular toxicology of engineered nanomaterials and lead. She has also worked on community-based approaches to addressing environmental health problems. Dr. Godwin is passionate about projects and programs that involve interdisciplinary collaboration and provide a scientific basis for prevention-based approaches to improving health.

**Health Update B: Passenger Risk Perception, Confidence, and Behavior**

**Dr. Baruch Fischhoff**

Dr. Baruch Fischhoff is the Howard Heinz University Professor in the Department Engineering and Public Policy and Institute for Politics and Strategy at Carnegie Mellon University. He is a member of the National Academy of Sciences and of the National Academy of Medicine and has held several high-level posts with national organizations focused on risk analysis, risk communication, and behavioral and social science research. Dr. Fischhoff is a Fellow of the American Psychological Association (APA), the Association for Psychological Science, the Society of Experimental Psychologists, and the Society for Risk Analysis. Among his many teaching
awards and honors, he has received APA’s Award for Distinguished Service to Psychology. A graduate of the Detroit Public Schools, he holds a BS in mathematics and psychology from Wayne State University and an MA and PhD in psychology from the Hebrew University of Jerusalem.

Overture – An Industry Overview in the New Normal to Ensure the Health and Safety of Travelers

Roger Dow, President and CEO, U.S. Travel Association

Roger Dow is the President and CEO of the U.S. Travel Association, a Washington, D.C.-based organization whose mission is to increase travel to and within the United States. Mr. Dow regularly meets with executive branch and congressional leaders to discuss industry priorities, and his efforts have resulted in major legislative victories. He was instrumental in establishing Brand USA, the highly effective national travel and tourism promotion program. Mr. Dow is the recipient of multiple honors, including the 2018 MPI Industry Leader Award. Mr. Dow served in the United States Army with the 101st Airborne Division in Vietnam, where he received the Bronze Star and other citations. He earned a Bachelor of Science degree from Seton Hall University and holds an honorary degree from Johnson & Wales University.

Medium- Large Hub Airports: Executive Level Discussion and Highlight of Current and Future Plans

Lance Lyttle, Managing Director, Seattle-Tacoma International Airport

Lance Lyttle is the Managing Director for Seattle-Tacoma International Airport. Before joining Port of Seattle, Mr. Lyttle was Chief Operating Officer for Houston’s three airports and Assistant General Manager at Hartsfield Jackson. A growth-oriented executive, he has led strategic development efforts of $5B at Houston airports and played a key role in the $6B development in Atlanta. Today he leads a multi-billion- dollar terminal revitalization program including an international arrivals facility, renovating the north and south satellites, and upgrading the baggage handling system. In 2017, he was elected to the Board of Directors of Airports Council International. Mr. Lyttle holds a B.Sc. in Physics and Computer Science and a M.Sc. in Management Information Systems.

Joseph Lopano, Chief Executive Officer, Tampa International Airport

Mr. Lopano has worked 40 years in the aviation industry: at Dallas/Fort Worth Airport for 14 years as its Executive Vice President for Marketing and Terminal Management; in leadership positions at Continental Airlines; and since 2011 in his current role as CEO of Tampa International Airport. Mr. Lopano serves on the board of the Hillsborough County Metropolitan Planning Organization and is a member of the Executive Committee for the Tampa Hillsborough Economic Development Corporation. Mr. Lopano is a member of the Tony Jannus Distinguished Aviation Society and a past Honorary Commander at MacDill Air Force Base. Nationally, Mr. Lopano serves on the Airports Council World Governing Board, the U.S. Travel Association’s Board and Executive Committee and the USTA Gateway Airports Council. He received a bachelor’s degree in finance and accounting from Pace University in New York.
**Airlines: Discussion and Highlights of Current Plans**

**Kirk Hotelling, Vice President, American Airlines**

Kirk Hotelling is Vice President of Airport Affairs and Facilities at American Airlines, where he oversees relationships with Dallas Fort Worth International Airport, Phoenix Sky Harbor International Airport, Los Angeles International Airport, and 300 non-hub airports. Kirk also manages redevelopment on American’s Robert L. Crandall Campus in Fort Worth and oversees American’s extensive construction portfolio at airports around the system. Mr. Hotelling joined US Airways in November 2000, which merged with American in December 2013. Before joining the airline, he served as an officer in the U.S. Army in Fort Benning, GA; Berlin, Germany; and in the Middle East during Operations Desert Shield and Desert Storm. A native of northwestern Ohio, Kirk is a 1988 graduate from the United States Military Academy at West Point and currently resides in Dallas, Texas.

**Andrew Boyett, Southwest Airlines**

Andrew Boyett leads Customer Experience Strategy at Southwest Airlines. As part of his day-to-day role, Mr. Boyett is responsible for overseeing ongoing investment in Southwest’s customers and ensuring that the organization has a vision for how the Southwest experience evolves over time. During the pandemic, Mr. Boyett’s role has also included developing the Southwest Promise, coordinating Customer Experience changes across the enterprise, and managing vendor relationships. Prior to Southwest Airlines, Mr. Boyett served as an operations executive in the manufacturing sector and a management consultant at Accenture. He holds a BA from Hampden-Sydney College and an MBA from Southern Methodist University.

**Other Stakeholders: Challenges of Social Distancing and a Touchless Environment**

**Joe Thornton, Vice President and Chief Operating Officer, HMS Host**

Joe Thornton is Executive Vice President & Chief Operating Officer at HMSHost, a global restaurateur and world leader in delivering innovative dining solutions in travel venues. HMSHost operates in more than 120 airports around the globe and at more than 80 travel plazas in North America. Joe is responsible for HMSHost operations of more than 1,700 food and beverage locations in North America. Mr. Thornton joined HMSHost in 2020. Before HMSHost, he was chief operating officer at Jamba Juice where he led all field and headquarter functions related to operations, operations services, training, and franchise support and before that he was with Starbucks, where he led the operation of 2,400 company-operated stores and 40,000 employees. Joe is actively involved in diversity work and is a keynote speaker on the topic of leadership in the community. He is a published author. His first book, “The Power Of Or: Choosing And Doing What Matters Most,” was released in February 2020.
Rob Mitchell, Business Development, Global Airport Partnerships, Uber

Rob Mitchell is the global airport partnerships lead for Uber Technologies, where he is responsible for Uber’s airport partnerships around the world. Through partnerships, operational excellence, and product development and innovation, he and the Uber airports team are committed to improving the end-to-end customer journey at airports. Prior to joining Uber, Rob previously served as Manager, Government and Airport Affairs at JetBlue. Rob holds a Master of Business Administration from Northwestern University–Kellogg School of Management and a Bachelor’s degree in Government from Wesleyan University.

Daniel Price, Policy Coordination Manager, Strategy, Policy Coordination, & Innovation, TSA

With over 15 years of experience in government and private sector, Dan is a leader in homeland security policy and trade and transportation security. Currently, Dan is serving as Vice Chair of TSA’s Business Resumption Task Force. Prior to joining TSA in 2019 as the Agency’s Manager for Policy Coordination, Dan helped establish and served as the Director of the Counter Unmanned Aircraft Systems (C-UAS) Program Management Office within the DHS Office of Strategy, Policy and Plans (PLCY). Mr. Price was instrumental in the development of new legislation and co-led critical negotiations with Congress that resulted in the enactment of the Preventing Emerging Threats Act of 2018 that provided new authorities for DHS to defend the national airspace against UAS threats – one of the Secretary’s top three priorities for 2018.

Before leading the Department’s C-UAS efforts, Dan was the permanent Principal Director for Trade and Transport Policy within PLCY’s Border, Immigration, and Trade and managed the strategic priorities of the Secretary of Homeland Security in these key mission areas. In that role, he supported the Department’s mission in vital and evolving policy domains and developed a cross-component teams to build an effective, strategic policy shop. Additionally, prior to joining PLCY, Dan managed the appropriations portfolio for the Office of Congressional Affairs at U.S. Customs and Border Protection (CBP) where, as the Branch Director for Budget and Appropriations, he was the agency’s primary point of contact with the Congressional budget and appropriations committees. During his time at CBP, he was part of the team that was instrumental in nearly doubling the agency’s operating budget to over $12 billion. As part of this work, he managed international and domestic trips for Congressional members and staff.

Prior to joining DHS, Dan represented private sector clients’ interests before Congress and the Administration while working at bipartisan lobbying firm on Capitol Hill. He is a graduate of the Pennsylvania State University and Johns Hopkins University. He has also been active in DHS’s leadership training institutes, successfully completing numerous programs, is the recipient of numerous Departmental awards and recognitions.
APPENDIX C: Survey Summary

1. How did you learn about the event?

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<th>Value</th>
<th>Percent</th>
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<td><strong>59</strong></td>
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<tr>
<td>Other - Please Specify</td>
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<td>AAAE Coronavirus Conference Call</td>
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<td>AGTA-Sarah Fisher, The Parking Spot</td>
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<td>LinkedIn</td>
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<tr>
<td>Not sure, AAAE or ACRP</td>
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<td></td>
</tr>
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<td>Totals</td>
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<td></td>
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2. My idea for additional related ACRP research is:

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<tr>
<td>12</td>
<td>My area of interest/research/teaching is air transportation and airports.</td>
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<tr>
<td>14</td>
<td>None at this time.</td>
</tr>
<tr>
<td>15</td>
<td>Impact of pandemic response on the planning and design of airport terminals.</td>
</tr>
<tr>
<td>16</td>
<td>Go beyond the standard ACRP process . . . don't give up the submit idea/gain support/bid a $500K project but go beyond it sometimes. Consider paneling something like the FAA's ARC process, only without the political shape of the ARCs.</td>
</tr>
<tr>
<td>17</td>
<td>It is amazing the speed in which you could research and present on a current topic like this!</td>
</tr>
<tr>
<td>20</td>
<td>N/A</td>
</tr>
<tr>
<td>24</td>
<td>N/A</td>
</tr>
<tr>
<td>28</td>
<td>Creating a single point of contact/communication for the public to know what the best practice is for safe travel in this time of COVID-19.</td>
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<td>Response ID</td>
<td>Response</td>
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<tr>
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</tr>
<tr>
<td>30</td>
<td>How airports are back-filling reallocated finances post-pandemic short term and medium term. Needs and uses for rainy day funds and during prolonged emergencies where airport tenants, concessionaires, and other stakeholders are also in fiscal distress. Tenant, concessionaire, and supplier contract language to manage risk of default during prolonged emergencies.</td>
</tr>
<tr>
<td>32</td>
<td>COVID-19: Social distancing terminal space requirements.</td>
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<tr>
<td>35</td>
<td>N/A</td>
</tr>
<tr>
<td>36</td>
<td>Better understanding of how traveler segments perceive risk could help airports accommodate and address concerns. Are leisure travelers more/less risk averse WRT COVID than business travelers, etc.?</td>
</tr>
<tr>
<td>37</td>
<td>Environmental impact (groundwater and surface water) of runway deicing chemistry.</td>
</tr>
<tr>
<td>39</td>
<td>Syntheses of effective practices for limiting the spread of viruses while maximizing safety, security, efficiency, and revenue.</td>
</tr>
<tr>
<td>41</td>
<td>A synthesis or quick response study, explaining efficacy of tests for disease. One of the first speakers addressed the fact that temperature readings were 50% or less effective, yet one of the airline speakers asked they be implemented immediately. Public health theater will not help and will be costly.</td>
</tr>
<tr>
<td>43</td>
<td>How to modify airport terminal and concourse to create physical barriers for the next virus that attacks our civilization.</td>
</tr>
<tr>
<td>46</td>
<td>Recent concern nationally has been the impacts to small businesses. Would be good to address how small business owners are seeing the industry.</td>
</tr>
<tr>
<td>47</td>
<td>Best practices to enhance or ensure the safety of airline/airport employees, as well as airline passengers to restore confidence in commercial air travel as a necessary precursor to a rebound in both travel and tourism.</td>
</tr>
<tr>
<td>48</td>
<td>Maybe the same topics in 60 days with an update. They were all very interesting and important.</td>
</tr>
<tr>
<td>49</td>
<td>How the PPE requirements will impact the transportation industries operations.</td>
</tr>
<tr>
<td>Response ID</td>
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<tr>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>50</td>
<td>A synthesis project on how airports/airlines/other tenants coped with immediate impacts of pandemic on air travel and strategies to address passenger customer health and safety as traffic resumed. Immediate impacts would include measures to address financial impacts of dramatic reduction in traffic.</td>
</tr>
<tr>
<td>51</td>
<td>The math, HR trends, biosafety measures.</td>
</tr>
<tr>
<td>52</td>
<td>Maintaining positive customer experiences in crisis situations.</td>
</tr>
<tr>
<td>53</td>
<td>Aviation industry financial health and employment.</td>
</tr>
<tr>
<td>54</td>
<td>Would like to see the research into the effects of the UV lighting explained once it is available. I would really like to know if it is effective against this current coronavirus.</td>
</tr>
<tr>
<td>56</td>
<td>Addressing potential overlap/conflict between airport security measures and safety measures that may result in conflicting considerations under a pandemic crisis (e.g., passengers wearing masks through security checkpoints and customs; passengers abilities to carry their own drinking water aboard and through security; to reduce onboard aircraft object touching and interaction with airport vendor in purchasing water after security checkpoint). Are inflight airplane cabin indoor air quality (e.g., recirculation rates, temperature, humidity) and disinfection protocol changes needed under “new normal” public health conditions? What are the implications?</td>
</tr>
<tr>
<td>57</td>
<td>Logistical impacts to day-to-day operations.</td>
</tr>
<tr>
<td>60</td>
<td>Frequent surveying of customers to forecast demand for air travel and determine which safety measures people want or don’t want from airports and airlines.</td>
</tr>
<tr>
<td>61</td>
<td>None at this time.</td>
</tr>
<tr>
<td>62</td>
<td>Safety resources for airports, latest developments, legal and liability issues with regard to exposure to COVID-19.</td>
</tr>
<tr>
<td>64</td>
<td>Cost of aircraft navigational services around the world.</td>
</tr>
</tbody>
</table>
### 3. What about this event did you find valuable?

<table>
<thead>
<tr>
<th>Response ID</th>
<th>Response</th>
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<tbody>
<tr>
<td>8</td>
<td>Was not able to attend due to schedule conflict but will review the recording.</td>
</tr>
<tr>
<td>10</td>
<td>Was unable to connect/attend.</td>
</tr>
<tr>
<td>12</td>
<td>Unfortunately, I've missed it because I was waiting for my registration being accepted as I submit it without reply.</td>
</tr>
<tr>
<td>13</td>
<td>We had storms going through here that afternoon, taking out our Internet for a portion of the afternoon. I'll watch when online. Sorry.</td>
</tr>
<tr>
<td>14</td>
<td>Was not able to attend but am looking forward to the recorded version.</td>
</tr>
<tr>
<td>15</td>
<td>Good cross-section of speakers.</td>
</tr>
<tr>
<td>16</td>
<td>It had a good agenda and it covered some foundational material as it attempted to set the table and then discuss current events.</td>
</tr>
<tr>
<td>17</td>
<td>Lots of different areas covered and several stakeholders’ points of view.</td>
</tr>
<tr>
<td>19</td>
<td>Was unable to attend due to a conflict but would appreciate a copy of the presentation when available.</td>
</tr>
<tr>
<td>20</td>
<td>The bringing together the perspectives of various stakeholders and the emphasis on making this a team effort.</td>
</tr>
<tr>
<td>21</td>
<td>The diverse panels/topics covered the topic from every angle. Great execution. Rhonda was a great moderator too.</td>
</tr>
<tr>
<td>22</td>
<td>Very well organized. Excellent speakers. Great timekeeping. Overall exceptional event that really provided a lot of value.</td>
</tr>
<tr>
<td>23</td>
<td>The health expert on the opening panel and the airport panel provided great information.</td>
</tr>
<tr>
<td>24</td>
<td>It was great to get perspectives from the various viewpoints from the industry.</td>
</tr>
<tr>
<td>26</td>
<td>All presentations.</td>
</tr>
<tr>
<td>27</td>
<td>Great updates from a variety of sectors in the industry.</td>
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<td>Response ID</td>
<td>Response</td>
</tr>
<tr>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>28</td>
<td>Expertise of the speakers.</td>
</tr>
<tr>
<td>29</td>
<td>Panel members and discussion, especially [Baruch] Fischhoff and [Hilary] Godwin, were enlightening. Others were as well, but the research community perspective was helpful.</td>
</tr>
<tr>
<td>30</td>
<td>The range of airport stakeholders represented was perfect.</td>
</tr>
<tr>
<td>32</td>
<td>The airport’s presentations by Lance Lyttle (Seattle-Tacoma International Airport) and Joseph Lopano (Tampa International Airport).</td>
</tr>
<tr>
<td>33</td>
<td>It was very interesting and informative to have all of the various stakeholders’ viewpoints shared in one session. It was particularly good to have the ongoing Q&amp;A that allowed all viewpoints to ask questions of one another and share insights.</td>
</tr>
<tr>
<td>34</td>
<td>Overall, this event was broad and had very interesting information.</td>
</tr>
<tr>
<td>35</td>
<td>Presenters and panelists were excellent; so was the moderator.</td>
</tr>
<tr>
<td>36</td>
<td>Yes! Public health and airline presentations were especially interesting.</td>
</tr>
<tr>
<td>37</td>
<td>Yes.</td>
</tr>
<tr>
<td>38</td>
<td>Finding out where the industry is at this stage of the pandemic.</td>
</tr>
<tr>
<td>39</td>
<td>Discussion from airports and airlines on measures they’re taking, like some of the doctors who shed some relevant and interesting facts about COVID that we may have not already known.</td>
</tr>
<tr>
<td>40</td>
<td>General information.</td>
</tr>
<tr>
<td>41</td>
<td>All of the perspectives covered.</td>
</tr>
<tr>
<td>42</td>
<td>Understanding how the airlines and airports are making changes for the future traveler.</td>
</tr>
<tr>
<td>43</td>
<td>Presentations for actual subject matter experts in the field such as airport directors.</td>
</tr>
<tr>
<td>44</td>
<td>Varied opinions.</td>
</tr>
<tr>
<td>45</td>
<td>The medical insights were some of the best I’ve heard.</td>
</tr>
<tr>
<td>Response ID</td>
<td>Response</td>
</tr>
<tr>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>46</td>
<td>Most impressive was that ACRP gave voice to FAA, health experts, airlines, airports, concessionaires, and service providers. Hearing everyone’s viewpoint is an excellent way to start solving problems and disagreements.</td>
</tr>
<tr>
<td>47</td>
<td>The breadth of coverage and timeliness of the material.</td>
</tr>
<tr>
<td>48</td>
<td>The diversity of the speakers. It was well thought out to cover many areas. We sometimes forget how large [of a] reach airports have in the whole transportation industry. Thought it was 4 hours; it moved fast.</td>
</tr>
<tr>
<td>49</td>
<td>Yes. It was great to hear the various industry viewpoints on the impacts of COVID-19 now and in the future and how we will get to a “new” normal.</td>
</tr>
<tr>
<td>50</td>
<td>Presentations from airports/airlines and other tenants.</td>
</tr>
<tr>
<td>51</td>
<td>The variety of presentations, high-quality panelists, and real information.</td>
</tr>
<tr>
<td>52</td>
<td>I thought the professor's discussion was enlightening, straightforward, and thought-provoking.</td>
</tr>
<tr>
<td>53</td>
<td>Variety of perspectives, health experts, opportunity for questions.</td>
</tr>
<tr>
<td>54</td>
<td>I found all information provided valuable.</td>
</tr>
<tr>
<td>55</td>
<td>Range of panelists.</td>
</tr>
<tr>
<td>56</td>
<td>Discussions of a broad scope of topics delivered by respective SMEs was very helpful (e.g., the public health, risk communication, and airport operational considerations associated with transitioning back to travel).</td>
</tr>
<tr>
<td>57</td>
<td>Speakers and their knowledge.</td>
</tr>
<tr>
<td>58</td>
<td>Great content and good event.</td>
</tr>
<tr>
<td>59</td>
<td>Real experience and case studies from peer airports and other concession leaders.</td>
</tr>
<tr>
<td>61</td>
<td>Learned what other airports are doing.</td>
</tr>
<tr>
<td>62</td>
<td>It covered a wide variety of stakeholder concerns.</td>
</tr>
<tr>
<td>63</td>
<td>Addressed all of the issues surrounding COVID-19 and the aviation world.</td>
</tr>
<tr>
<td>Response ID</td>
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<tr>
<td>-------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>64</td>
<td>The harmony between the different aviation stakeholders.</td>
</tr>
<tr>
<td>65</td>
<td>Presentations by concessionaire, Uber, and the airlines.</td>
</tr>
<tr>
<td>66</td>
<td>It was good to hear from so many various aspects of the impact of the pandemic and recovery ideas, especially since many are interrelated at some point.</td>
</tr>
<tr>
<td>67</td>
<td>I found the talk from the gentleman in Tampa valuable. He had real world practical suggestions for making people feel safer.</td>
</tr>
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### 4. Was there anything about this event you did not find valuable?

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<tr>
<th>Response ID</th>
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<tr>
<td>9</td>
<td>I unfortunately was unable to connect with this meeting due to my remote work location and fickle Zoom connectivity. I am hopeful this will resolve prior to a next event of interest.</td>
</tr>
<tr>
<td>12</td>
<td>N/A</td>
</tr>
<tr>
<td>14</td>
<td>N/A</td>
</tr>
<tr>
<td>17</td>
<td>The medical side was good general background but similar to everything we already knew.</td>
</tr>
<tr>
<td>20</td>
<td>Nope!</td>
</tr>
<tr>
<td>23</td>
<td>No, but it was too long.</td>
</tr>
<tr>
<td>24</td>
<td>Most organizations spent more time than I anticipated explaining how bad it has been.</td>
</tr>
<tr>
<td>26</td>
<td>No.</td>
</tr>
<tr>
<td>28</td>
<td>USTA speaker was light on substance—didn’t add a lot of value. Would like to see more time made available for Q&amp;A and have all speakers stay for Q&amp;A.</td>
</tr>
<tr>
<td>29</td>
<td>No.</td>
</tr>
<tr>
<td>Response ID</td>
<td>Response</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>30</td>
<td>Federal presence was necessary but disappointing. It was not the presenters, just the lack of information.</td>
</tr>
<tr>
<td>32</td>
<td>Not really, it was all really good.</td>
</tr>
<tr>
<td>33</td>
<td>I thought it was very well done and found it all to be valuable.</td>
</tr>
<tr>
<td>34</td>
<td>Not really.</td>
</tr>
<tr>
<td>35</td>
<td>It was good content. The moderator having to ask Jeanne to unmute people so frequently was a bit distracting.</td>
</tr>
<tr>
<td>36</td>
<td>I thought the presentation on risk communication was too theoretical.</td>
</tr>
<tr>
<td>38</td>
<td>The philosophies of the presenters.</td>
</tr>
<tr>
<td>39</td>
<td>Some of the commentary between presentations was basic, common-sense things that we all know. I felt this distracted from the meaningful content on what folks are doing to effectively respond to COVID.</td>
</tr>
<tr>
<td>40</td>
<td>Would have liked to see a smaller operator than HMSHost. Would have been better to know how smaller units weather the storm.</td>
</tr>
<tr>
<td>41</td>
<td>The event was valuable. In this virtual world, the participants were very siloed. Perhaps a panel discussion at the end so that all perspectives could have a group discussion.</td>
</tr>
<tr>
<td>43</td>
<td>I thought it was a little too optimistic since it was coming from an industry point of view. I would have liked more economic forecasting that was realistic.</td>
</tr>
<tr>
<td>44</td>
<td>Some materials were overlapping.</td>
</tr>
<tr>
<td>45</td>
<td>Maybe a little long. It was repetitive at times.</td>
</tr>
<tr>
<td>46</td>
<td>It was loooooong.</td>
</tr>
<tr>
<td>47</td>
<td>Transitional difficulties and speakers who were not available or ready on cue.</td>
</tr>
<tr>
<td>48</td>
<td>No, I gained practical knowledge that will assist me.</td>
</tr>
<tr>
<td>49</td>
<td>No.</td>
</tr>
<tr>
<td>Response ID</td>
<td>Response</td>
</tr>
<tr>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>50</td>
<td>Public health presentation contained information I had learned from other sources. Communication presentation could have been better tied to specific issue of COVID-19.</td>
</tr>
<tr>
<td>51</td>
<td>It was very good.</td>
</tr>
<tr>
<td>52</td>
<td>The length—I had to get off the call because work was interfering.</td>
</tr>
<tr>
<td>53</td>
<td>A bit long at 4 hours.</td>
</tr>
<tr>
<td>54</td>
<td>I found the presentations by the airlines felt like advertisements (if that was the intention it was okay, but I found it shifted the feel of the webinar for me).</td>
</tr>
<tr>
<td>55</td>
<td>No.</td>
</tr>
<tr>
<td>56</td>
<td>No.</td>
</tr>
<tr>
<td>57</td>
<td>None.</td>
</tr>
<tr>
<td>59</td>
<td>No, it was very well organized and moderated.</td>
</tr>
<tr>
<td>60</td>
<td>It wasn’t specific to air travel—most of what was said could have been said about any industry.</td>
</tr>
<tr>
<td>61</td>
<td>Standard COVID-19 CDC measures.</td>
</tr>
<tr>
<td>62</td>
<td>No.</td>
</tr>
<tr>
<td>63</td>
<td>Not at all.</td>
</tr>
<tr>
<td>64</td>
<td>The airline representatives (American and Southwest) were not too clear in their presentations.</td>
</tr>
<tr>
<td>66</td>
<td>Some of the information was not new to me but, as a first, hopefully [a] first of at least a few, it is probably good to have that base of information.</td>
</tr>
<tr>
<td>67</td>
<td>You are attempting to serve a wide audience, and I do not like to identify something just because it was valuable to me. I think you covered the issue from many different angles and with something new like this that is necessary.</td>
</tr>
</tbody>
</table>
5. I would like to receive news about upcoming ACRP events and webinars.

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<thead>
<tr>
<th>Value</th>
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<td>Totals</td>
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## APPENDIX D: List of Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chance Abbey</td>
<td>Stephanie Baldwin</td>
<td>Rob Brethauer</td>
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<tr>
<td>Jorge Acha</td>
<td>Lori Ballard</td>
<td>Marc Brooks</td>
</tr>
<tr>
<td>David Adams</td>
<td>Numair Bari</td>
<td>Renee Brooks</td>
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<tr>
<td>Mark Adams</td>
<td>Francis Barich</td>
<td>Barry Brown</td>
</tr>
<tr>
<td>Rose Agnew</td>
<td>Justin Barkowski</td>
<td>Florence Brown</td>
</tr>
<tr>
<td>Matthew Aguilar</td>
<td>Anthony Barnes</td>
<td>William Brown</td>
</tr>
<tr>
<td>Marvin Agumagu</td>
<td>Heather Barry</td>
<td>Ellen Brunjes-Brandt</td>
</tr>
<tr>
<td>S. Air</td>
<td>Daniel Barton</td>
<td>AmyClaire Brusch</td>
</tr>
<tr>
<td>Tea Alania</td>
<td>Harper Bateman</td>
<td>Kenneth Buckner</td>
</tr>
<tr>
<td>Earlyne Alexander</td>
<td>Steve Baun</td>
<td>Susan Busque</td>
</tr>
<tr>
<td>Marcia Alexander-Adams</td>
<td>Gary Beal</td>
<td>Pete Butler</td>
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<tr>
<td>Carlos Almeida</td>
<td>Jerry Beckmann</td>
<td>Lissa Butterfield</td>
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<td>Carlos Alvarado</td>
<td>Heidi Benaman</td>
<td>Philip Calderone</td>
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<tr>
<td>Fekade Amare</td>
<td>Gloria Bender</td>
<td>Brett Caldwell</td>
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<td>Peter Amaro</td>
<td>Younes Benheddi</td>
<td>Chellie Cameron</td>
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<td>Jaime Ambrosio</td>
<td>Derryl Benton</td>
<td>Blake Carlson</td>
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<td>Doug Anderson</td>
<td>Allen Berentes</td>
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<td>Gabriel Andino</td>
<td>Paul Berumen</td>
<td>Thiane Carter</td>
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<tr>
<td>Eduardo Angeles</td>
<td>Andrea Bickley</td>
<td>Bill Casey</td>
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<td>Api Appulingam</td>
<td>Jordan Biegler</td>
<td>Gustavo Ceballos</td>
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<td>Jeff Bilyeu</td>
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<td>Jason Ashby</td>
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<td>Ann Asiano</td>
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<td>Stephanie Atallah</td>
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<td>Michael Audino</td>
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<td>Susan Ault</td>
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<td>Lisa Aultman-Hall</td>
<td>Juanita Bonds</td>
<td>Wesley Chee</td>
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<td>Paul Aussendorf</td>
<td>Kevin Booth</td>
<td>Charles Chen</td>
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<td>Scott Ayers</td>
<td>Tommy Booth</td>
<td>Yi Chen</td>
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<td>Hasaan Azam</td>
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<td>Michelle Brantley</td>
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<td>Krishna Balakrishnan</td>
<td>Kelly Braun</td>
<td>Michael Clow</td>
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68
Adam Cohen
Josh Cohn
Tim Conahan
Matthew Coogan
Antonio Correas
Stephan Corrie
Todd Cox
Lana Cramer
Michael Crane
Melinda Crawford
Sonia Cruz
Marianne Csaky
Laurie Cullen
Paul Cullen
Stephen Cusick
Tim Dacey
Crystal Dallas
Philip Daniele
Marilyn Daniels
Cassandra Davisson
Doreen Dazenski
Gonzalo De La Melena
José de Magalhães
Lorena de Rodriguez
Justin Deadwyler
Benjamin DeCosta
John DeCoster
Britt DeTienne
Jay DeWitt
Krista Dillion
James Dingell
Christopher DiPrima
Ryan Dittoe
Favian Dixon
Terry Dlugos
Drake Dodson
Leah Douglas
Roger Dow
Brian Drake
Anthony Dudas
Oris Dunham
Jim Durwin
Renee Dutia
Greg Dyer
John Eagerton
Kristen Easterday
Garfield Eaton
Margaret Egerland
Curt Eikerman
Bart Elias
Rich Elwell
Karen Engelbrecht
Kimberly Engle
Michelle Eshow
Darron Evans
Kimberly Evans
Tricia Fantinato
Peter Farrell
Luis Fermin
Alicia Fernandes
Florian Fessel
Michael Fetchko
Grant Firestone
Carla Fischer
Stephanie Fischer
Baruch Fischhoff
David Fish
Elena Fisher
Sarah Fisher
Sean Fitzpatrick
David Fleet
Bob Fletcher
Hilary Fletcher
Dean Fojo
Colleen Forst
Josh Francosky
Stephanie Freeman
Jim Fricke
Kelly Fukai
Neil Gabrielson
Aldo Garcia
Mike Garlick
Karnardo Garnett
Laurie Garrow
Robin Gibson
Spencer Gillette
Mike Gillock
Michael Glazer
Lauri Goden
Hilary Godwin
Joletta Golik
Ronald Gomes
Charles Goodwin
Geoffrey Gosling
Jim Greaney
Marci Greenberger
Ginga Griffin
Matt Griffin
Shannetta Griffin
Donald Griffith
Emma Griffith
Christopher Grillo
Courtney Grove
Liying Gu
Justin Guan
Claude Guillaume
Pierrette Guimond
Reena Gulati
Stephanie Gupta
Duane Habeck
Patricia Haley
Alexandra Hall
Marcus Hall
Mital Hall
Douglas Hamilton
Rhonda Hamm-Niebruegge
Belinda Hargrove
Catherine Harmel
Donald Harper
Jerry Harris
Andrew Harsh
Danielle Hartman
Alison Hashimoto
Mehnaz Hassan
Leslie Hausman
Rob Hawks
Chris Hedges
Brian Helms
Katie Hemmer
Frank Hermann
Martha Hernandez
Paul Herrera
George Hess
Diane Hofer
Mike Holston
Drew Homyk
David Hopkins
Kirk Hotelling
Jeff Hough
Joseph Huber
Raymond Hunting
Ken Ibold
David Ishihara
Ali Jafarnejad
Nick James
Sandra Janssen
Merritt Jenkins
Jessica Johnson
Sabrina Johnson
Petr Justin
Sara Kalb
Bhuvaneshwaran Kalimuthu
Bernie Kanger
Agnieszka Kardasz
Alysha Keeling
Rob Kelley
Paul Kennedy
Robert Kenney
Vivek Khanna
Mitchell Kilian
Peter Kirsch
Peter Klingman
Jason Knipp
Tamas Kolos-Lakatos
Kristina Korge
Art Kosatka
Sarah Kosling
Lois Kramer
Stephanie Kranz
Ryan Kreulen
Paul Krieger
David Kulinsky
Aaron Kunz
Susan Kurland
Paulos Lakew
Darin Lang
Shawna Larson
Patricia Le
Gael Le Bris
Lisa LeBlanc-Hutchings
Jane Lee
Lily Lee
Joshua Lemeshow
Diane Lemke
Winsome Lenfert
Caroline Leonard
Sierra LePore
Alex Levin
Joseph Licitra
Elliott Lindgren
Paul Lo
Erin Locklear
Bryan Loden
Joseph Lopano
Sean Loughran
Remy Lucette
Nels Lund
Mark Lunsford
Claudia Luquin
Carol Lurie
Jenny Ly
Anna Lynch
Lance Lyttle
Katrina Ma Katy Tang
Lynne Madera
Todd Madison
Stephen Maher
Connor Maldonato
Scotty Malta
Peter Mandle
Howard Mann
Richard Marchi
John Mares
Larry Mares
Caroline Marete
Maria Muia
Gail Marnik
Casey Martin
Juan F. Martinez
Rose Marie Martinez
Andrew Martz
Stacy Mattson
Hovlyn May
Ellen McClain
Kip McClain
Denise McElroy
Chuck McFall
Nancy McGuckin
Laura McKee
Brian McKeehan
Darrin McKenna
Margaret McKeough
Michael McLanahan
<table>
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<th>Karen Weller</th>
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<td>Dan Wesely</td>
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