Toward a Touchless Airport Journey

May 10, 2023

Today's Learning Objectives

(1) Identify existing solutions for airports to create a touchless customer experience

(2) Prepare for and implement touchless solutions

(3) Utilize available resources for deploying touchless solutions

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1.5 American Institute of Certified Planners Certification Maintenance Credits

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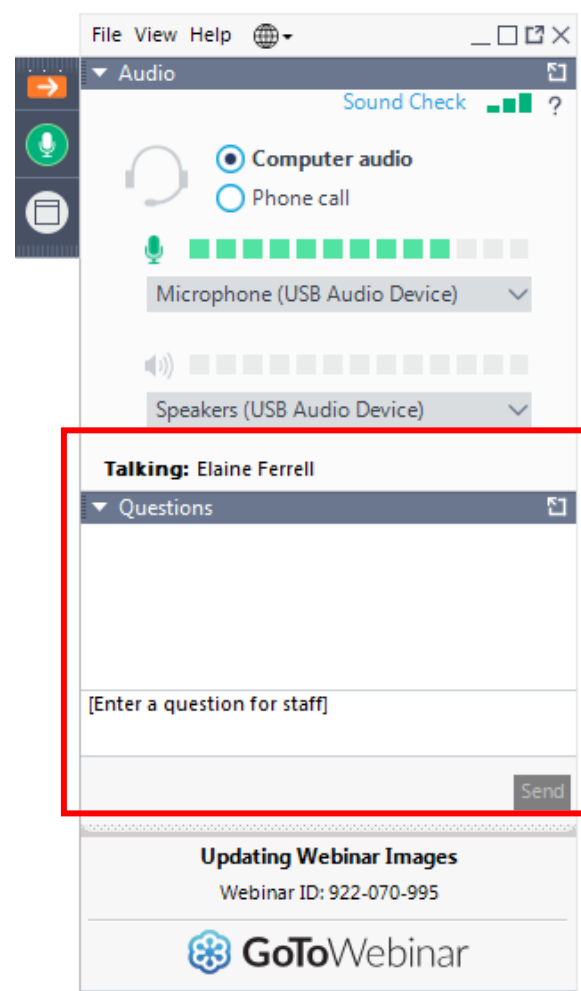## Log into the American Planning Association website to claim your credits

Contact AICP, not TRB, with questions

Questions and Answers

Please type your questions into your webinar control panel

We will read your questions out loud, and answer as many as time allows

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Francis (Frank) Barich, P.E.

- Principal Consultant for Barich, Inc.
- Serves on Board of Directors
- Serves on Airports Council International World and North America (ACI-World & -NA) committees, the International Air Transport Association (IATA) Passenger Experience working groups, and the Transportation Research Group, Airport Cooperative Research Program (ACRP).
- Principal Investigator for this ACRP project, *Towards a Touchless Journey*

Today's Speakers

Leslie Ruiz
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Ron Hiscox
ron.hiscox@airportprocessdesign.com
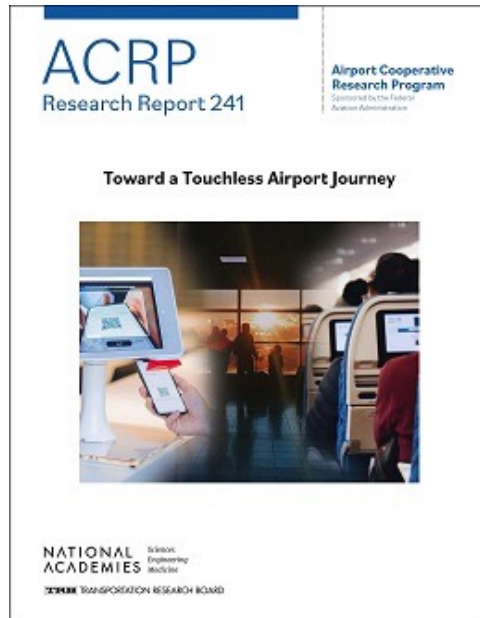Airport Process Design, Ltd.

Martin Leprohon
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Toward a Touchless Airport Journey

Going Touchless:
What It Means
and Best Practices

Leslie F. Ruiz

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Toward a Touchless Airport Journey

✈ **Research Problem and Approach**

✈ Trends in Aviation Industry

✈ Best Practices and Lessons Learned

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Research Problem

✈ Airports need guidance to identify key touchpoints and implementable technology solutions to institute a "touchless travel" model

- Improve security and safety
- Smoother passenger journey
- Risk of spreading contagious diseases

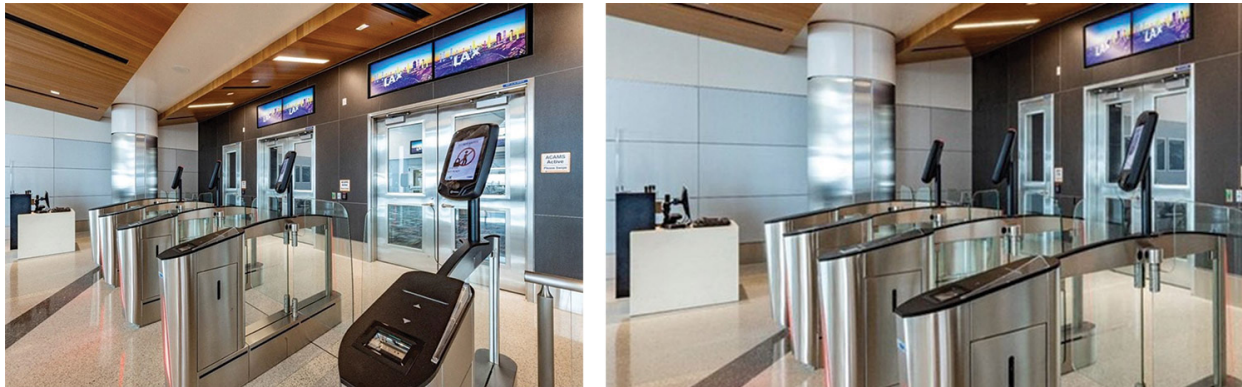# Toward a Touchless Airport Journey

Research Approach

✈ Literature review

✈ Case studies
- Large Airports and Airlines (10)
- Related Stakeholders (18)
- Small and Medium Airports (5)
- Non-Aviation Sector (3)

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What It Means To Go Touchless

✈ Minimize interactions with people

LAX Biometric eGates *(Photo by Los Angeles World Airports; ©2020 Joshua Sudock)*

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What It Means To Go Touchless

✈ Minimize interactions with surfaces

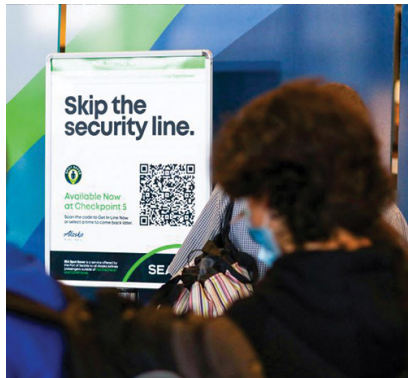PHX Parking Reservation System *(Photo by Phoenix Sky Harbor)*
https://www.skyharbor.com/parking/
https://www.skyharbor.com/parking/rewards/

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What It Means To Go Touchless

✈ Reduce congestion of people

Congestion of People

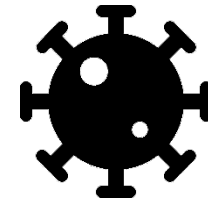**SEA Spot Saver** *(photos courtesy of Port of Seattle/SEA Airport)*

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✈ Research Problem and Approach

✈ **Trends in Aviation Industry**

✈ Best Practices and Lessons Learned

Toward a Touchless Airport Journey

Fast Travel
Seamless
Frictionless

Contactless
Touchless

Toward a Touchless Airport Journey

Trends in the Aviation Industry

Providing a seamless or frictionless airport journey

Enabling passengers to take control of their journey

Providing cleaner and more modern airport facilities

Toward a Touchless Airport Journey

✈ Research Problem and Approach

✈ Trends in Aviation Industry

✈ **Best Practices and Lessons Learned**
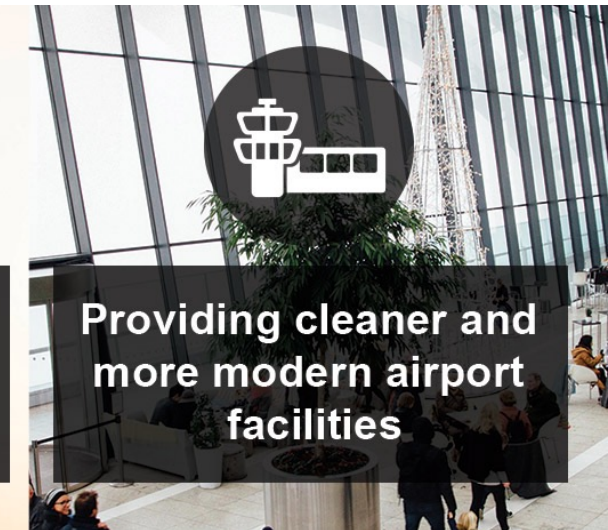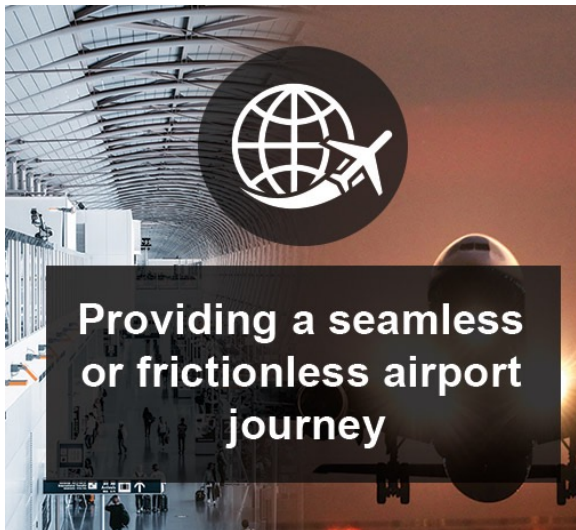
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Best Practices and Lessons Learned

Connect with Airport Strategy or Technology Direction		Understand the Importance of Strong Leadership	
Collaborate with Your Stakeholders		Focus on Helping the Passenger	
Communicate with the Passenger		Leverage Additional Resources in the Community and Beyond	
Understand the Importance of Data			

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Best Practices and Lessons Learned

Understand the Importance of Strong Leadership

Leadership should outline a clear corporate strategy

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Best Practices and Lessons Learned

Collaborate with Your Stakeholders

Collaboration is essential to promote the use of holistic touchless solutions

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Best Practices and Lessons Learned

Focus on Helping the Passenger

Look at touchless solutions from the perspectives of passengers or staff members

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Best Practices and Lessons Learned

Communicate with the Passenger

Measures that require a shift in passenger behaviors should be introduced with a clear communication plan

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Best Practices and Lessons Learned

Leverage Additional Resources in the Community and Beyond

A key to the success of touchless solutions is to ensure that they are also consistent beyond the airport

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Best Practices and Lessons Learned
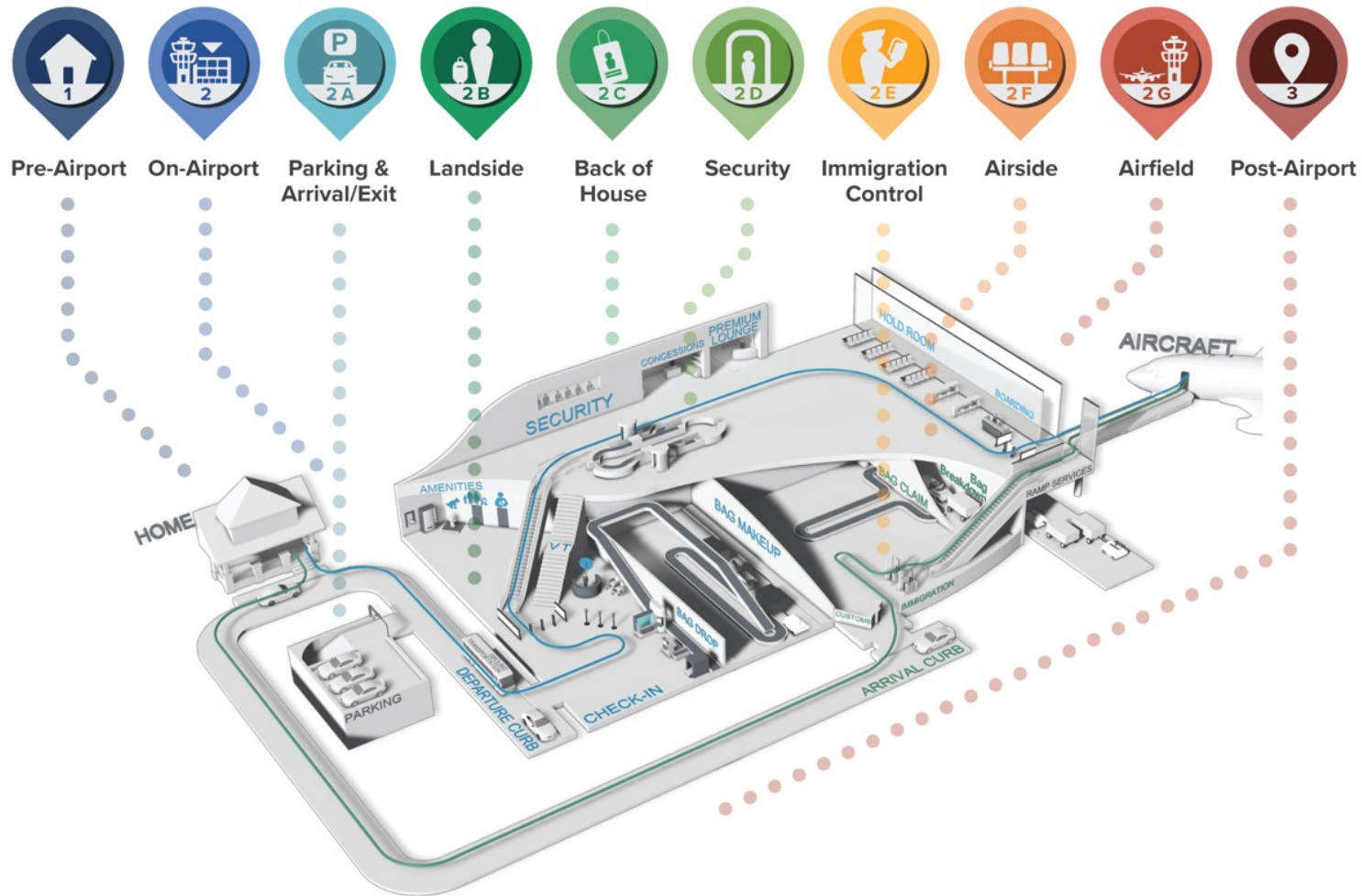

Understand the Importance of Data

Qualitative and quantitative data provides important feedback on the efficiency of touchless solutions

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Taking Action

Ron Hiscox

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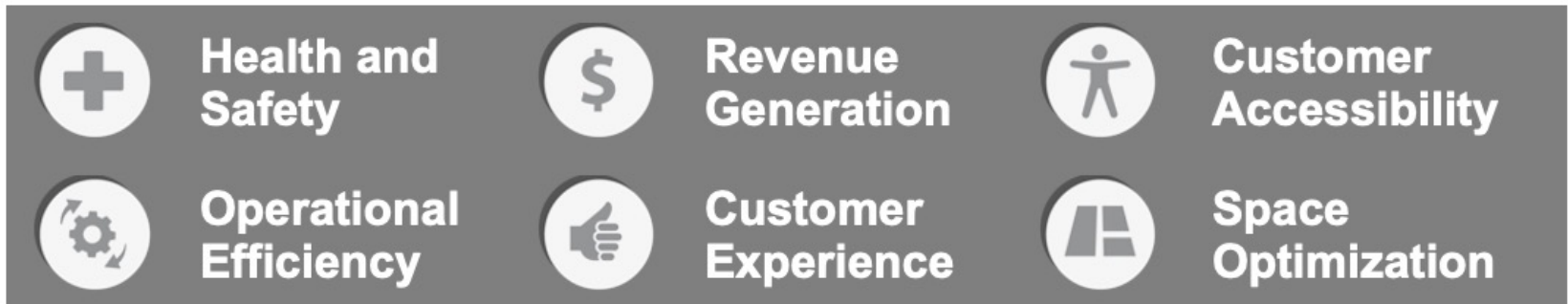SCIENCES · ENGINEERING · MEDICINE

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Toward a Touchless Airport Journey

Solutions Along the Airport Journey

Solution Name	Journey Areas									
	1	2	2A	2B	2C	2D	2E	2F	2G	3
Access Control Systems					•			•	•	
Automated Access Systems				•		•	•			
Automated Car Park Systems			•							
Autonomous Wheelchairs				•						
Baggage Divesting Solutions	•									•
Baggage Prepping Solutions	•									
Baggage Screening Systems					•	•				
Biometric Technology	•			•	•	•	•	•	•	
Elevator Related Solutions		•	•	•	•	•	•	•	•	
Enhanced Surface Cleaning Related Solutions		•	•	•	•	•	•	•	•	
Feedback Devices		•		•		•	•			
Food Ordering and Delivery				•			•			

Toward a Touchless Airport Journey

Value Propositions

Health and Safety

Revenue Generation

Customer Accessibility

Operational Efficiency

Customer Experience

Space Optimization

Toward a Touchless Airport Journey

Key Drivers for Touchless Solutions

✈ Business drivers

- Increasing efficiency to accommodate higher passenger volumes
- Using automation to reduce labor costs

✈ Urgency

- In reaction to pandemic, low passenger numbers and health & safety protocols
- Proactive mindset in implementing lessons learned

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Factors to Consider

→ Airport operators should consider the following factors when implementing touchless solutions:

- Cost
  - Is the cost of implementation of new systems and technology exceeded by the benefits brought by these new systems?

- Support and Maintenance Requirements
  - Throughout the implementation, the airport should address the ongoing maintenance of the touchless product or service and the associated need for support through internal resourcing or external contracting.

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Factors to Consider (cont'd)

✈ Alternative Solutions
- The implementation of touchless solutions should focus on the effect on the passenger journey rather than on the solution itself.
- Consider quality of service as a KPI

✈ Readiness
- Readiness for implementation should be assessed against the airport's existing layout and systems to identify any gaps.
- Implementation should consider future proofing

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Touchless Airports in an International Context

Martin Leprohon, P.Eng.
Airbiz Aviation Strategies

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Source: Airbiz

Toward a Touchless Airport Journey

Qantas Next-Gen Check-In
November 2010

Source : Qantas

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Source : Qantas

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Biometrics

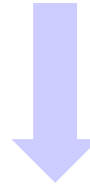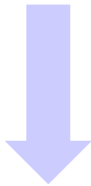Digital travel credential (DTC) based on ICAO's eMRTD **standards**

Identity Management **Platform** using a **single token** across the passenger journey

Decentralized identity platform based on **blockchain** technology that enable an individual to **self-manage** their identity attributes.

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Reaction to COVID-19 Pandemic

Smart Vaccination
Certificate (SVC)

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Passengers Taking Control of their Journey
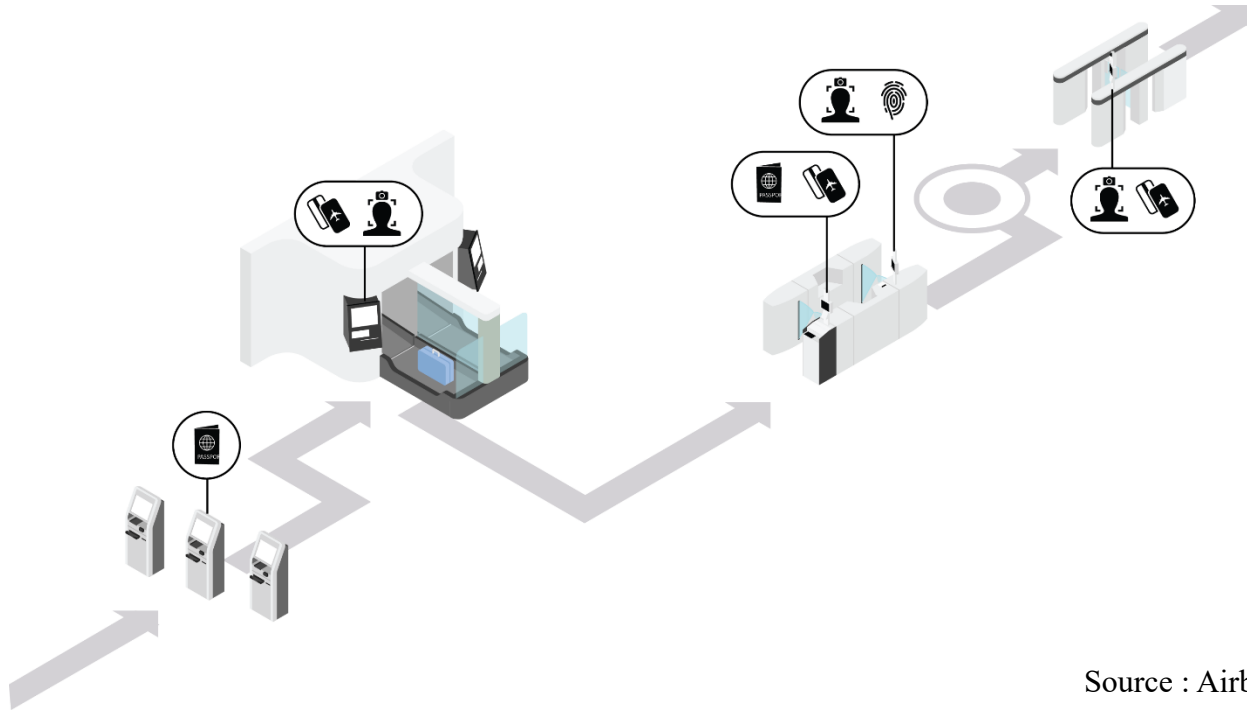✈ Seamless Identity Verification

Source : Vison-Box

Source : Passenger Terminal Today

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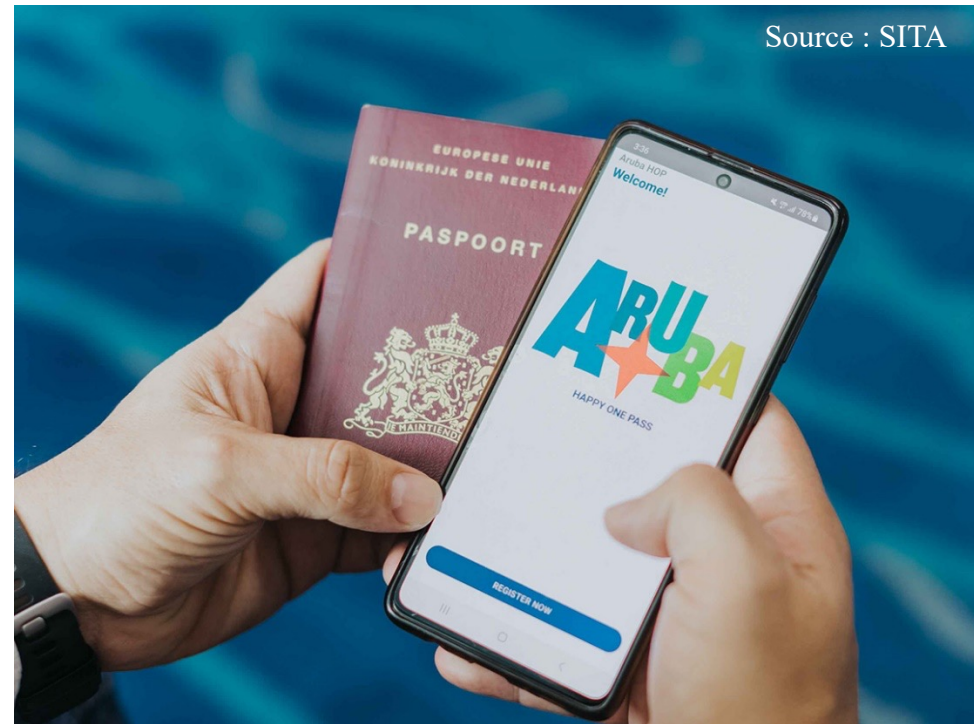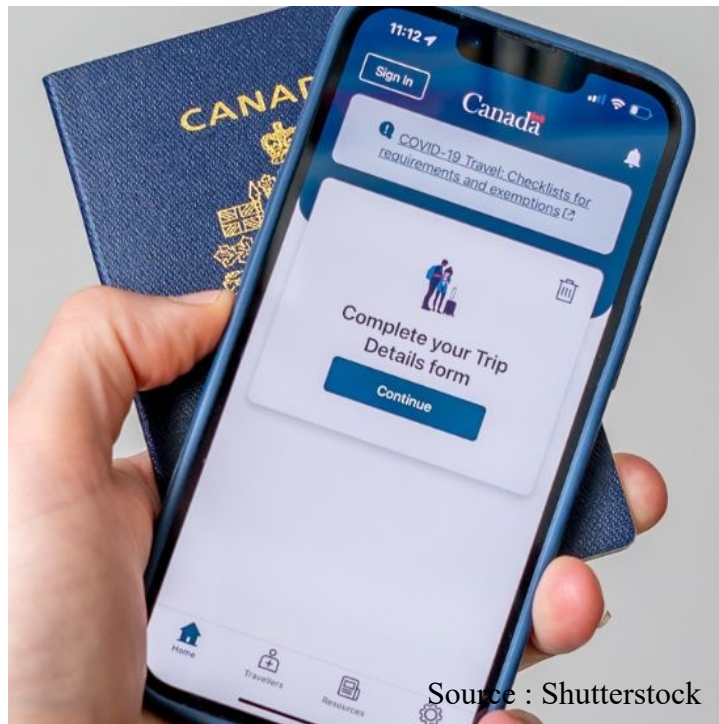## Providing a Seamless Airport Journey

✈ End-to-End Journey

Source : Airbiz

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Providing a Seamless Airport Journey

✈ Mobile Applications

Source : Shutterstock

Source : SITA

Toward a Touchless Airport Journey

Passengers Taking Control of their Journey

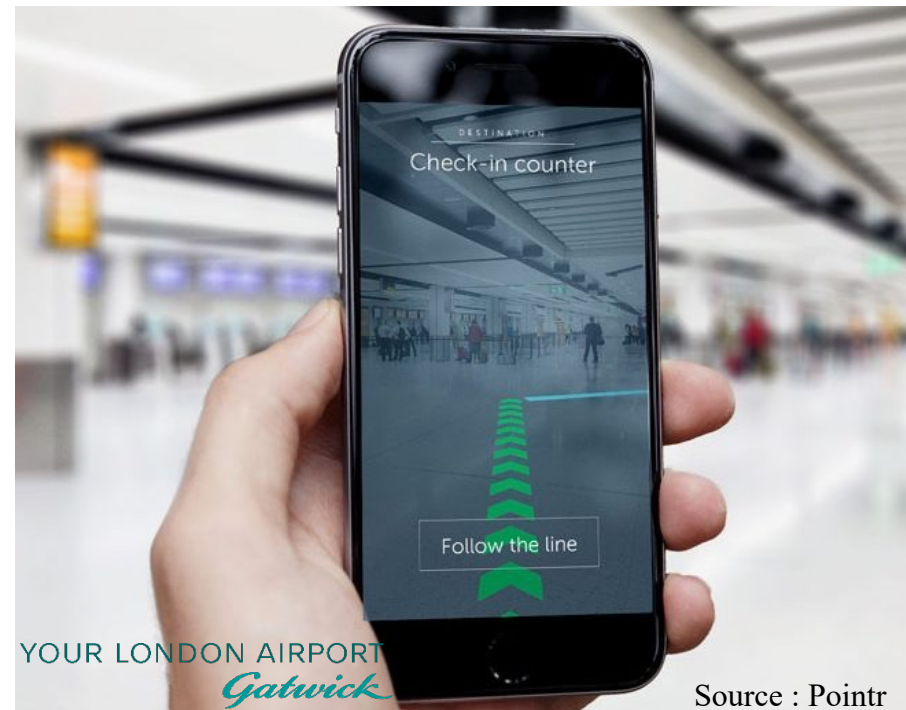✈ Remote Baggage Drop-Off

Hong Kong (MTR Train Stations)

Taipei (MRT Train Station)

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Passengers Taking Control of their Journey
✈ Accessibility & Wayfinding

Source : Whill

DESTINATION
Check-in counter
Follow the line
YOUR LONDON AIRPORT
Gatwick
Source : Pointr

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Cleaner and More Modern Airport Facilities

✈ Autonomous Cleaning

✈ UV-C

Source : Changi Airport

Source : Hong Kong Airport
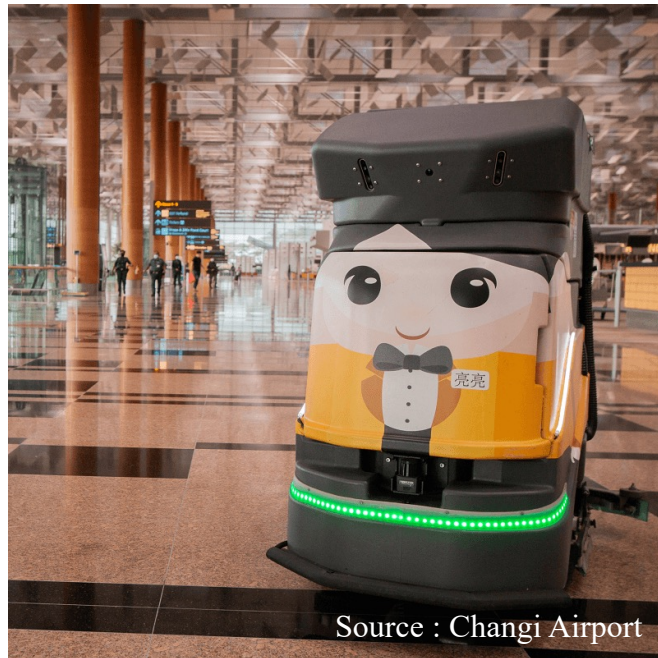
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Passengers Taking Control of their Journey

✈ At-Gate Food Delivery

Source : Deliveroo

Passengers Taking Control of their Journey
✈ Autonomous Valet Car Parking

Source : Stanley Robotics

Automated Valet Parking

Source : Mercedes/Bosch

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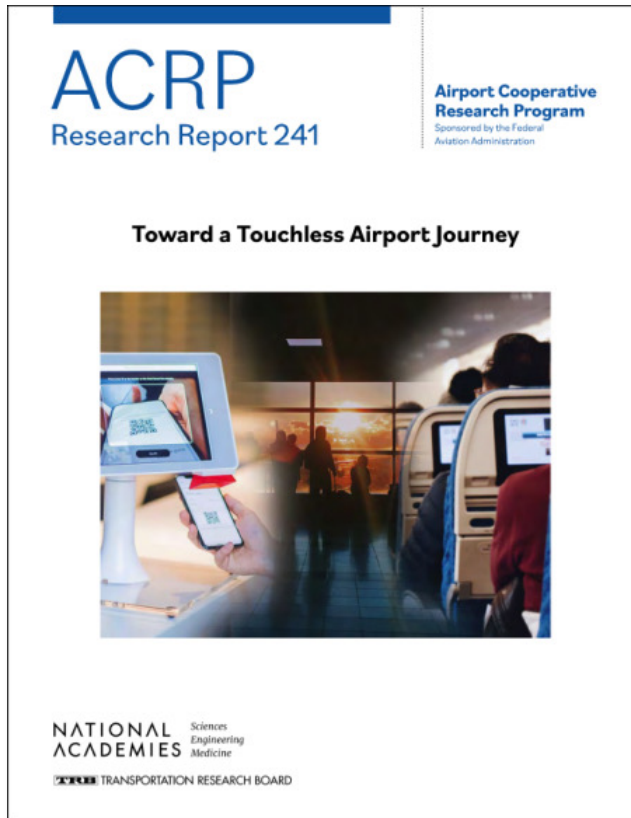
Toward a Touchless

Airport Journey

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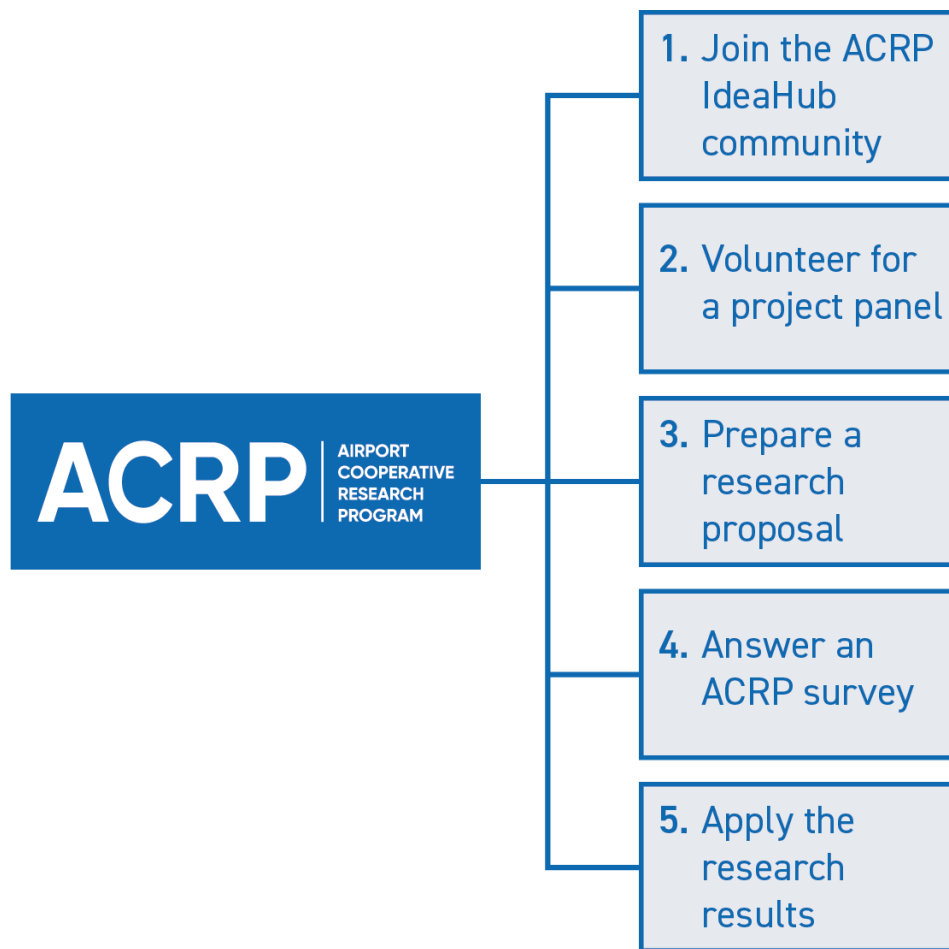ACRP | AIRPORT COOPERATIVE RESEARCH PROGRAM

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