

TRANSPORTATION RESEARCH BOARD

Staying connected - Improving your airport's communication strategies

Monday, May 11, 2020
2:00-3:30 PM ET

@NASEMTRB
#TRBWebinar

Learning Objectives

At the end of this webinar, you will be able to:

- List necessary resources for assessing, planning, developing, formalizing and implementing a public notification program
 - Discuss how public notification programs can be customized for airports of different types, sizes and configurations
 - Identify current practices of airports regarding their communication strategies with passengers with disabilities, aging passengers and passengers with limited English proficiency
- 

Staying Connected – Improving Your Airport's Communication Strategies

May 11, 2020



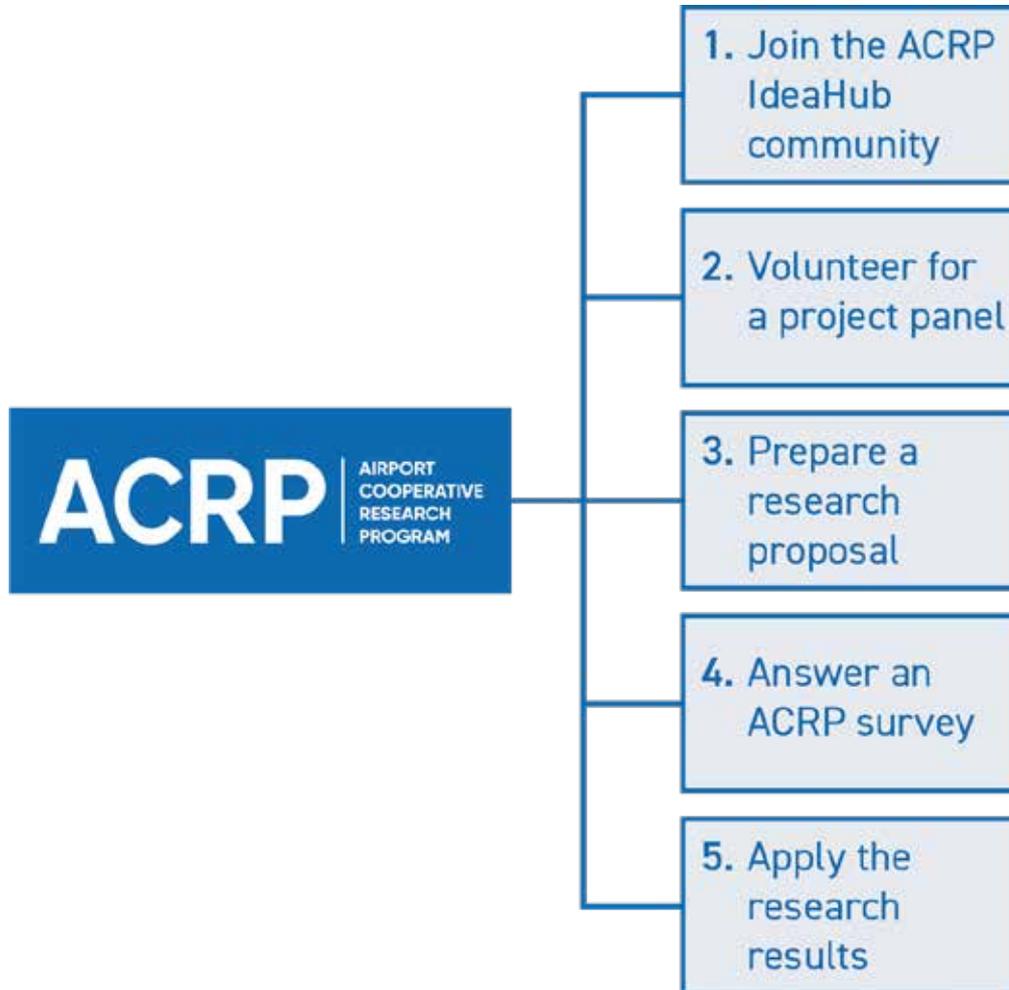
Steve Wareham

Landrum & Brown

- Steve Wareham is an Associate Vice President at Landrum and Brown and works at a number of US airports on a variety of assignments.
- Steve was previously the Director of MSP Operations at the Minneapolis-St. Paul International Airport



Five Ways to Get Involved!



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Today's Speakers

Shu Cole, Indiana University, and
Steve Mayers, Hartsfield-Jackson Atlanta International Airport

Presenting
ACRP Synthesis Report 101:
Communication Strategies for Airport
Passenger Access and Mobility

Lorena DeRodriguez, SSi, Inc.

Presenting
ACRP Report 170:
Guidebook for Preparing Public-Notification
Programs at Airports

ACRP Report 170

Guidebook for Preparing Public-Notification Programs at Airports



Lorena de Rodriguez

ss i
safety & security instruction



Lorena de Rodriguez

Project Manager / Investigator Assistant



- President of Safety & Security Instruction
- ACI-World Standing Security Cmte
- Former Airline Ground-handler
- University Adjunct Instructor
- Participant on many ACRP and Industry Panels

SSi Team - Project Approach



Jack Plaxe – security SME

Melana Tautkus - editor

John Sawyer – PI and Operations SMS (retired)

JMS Airfield Safety Consulting LLC

Gloria Bender

Stephen Lehocky

Jessica Gafford



TRANS SOLUTIONS

ACRP Report 170 Oversight Panel

Dominic A. Nessi, Aviation-ISAC (Intelligence Sharing and Analysis Center), Las Vegas, NV (Chair)

Roger D. Hamilton*, W.A.M.D.I. Aviation Consultants, Covington, KY

W. Casey Kinosz, Director of Operations/AOC, CVG Airport, Hebron, KY

Chad R. Makovsky, Executive VP-Operations, D/FW Airport, TX

Maureen Pettitt, M Pettitt Consulting, Burlington, WA

Taiya Carter, FAA Liaison

Supriya Raman, FAA Liaison

Christine Gerencher, TRB Liaison

Joseph D. Navarrete, ACRP Senior Program Officer

WHAT?

WHERE?

WHO?

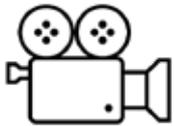
WHEN?

WHY?

HOW?

Introduction to Research

Why?



Critical Decision-Making for Program Development

Why?



Approach to Getting Answers

How?

Chapter 1: Guidebook Objective and Methodology;

Chapter 2: Critical Decision-Making Areas for Program Development;

Chapter 3: Conducting a Needs Assessment;

Chapter 4: Exploring Options;

Chapter 5: Developing the Program;

Chapter 6: Formalizing the Program;

Chapter 7: Implementing the Program and Managing via Continuous Improvement Cycles;

- Appendix A: Notification Tools and Methods;

- Appendix B: Benefit/Effort Matrix;

- Appendix C: Notification Templates and Scripts;

- Appendix D: Sample Notification Program Template (NIMS Format); and

- Appendix E: Overall Program Decision Guide (OPDG).

Exploring Options

Where?

Option 1



- **Existing AEP (including emergency notifications).** Emergency notifications remain in the AEP. All other functional sections are written into a stand-alone notification program.

Option 2



- **Existing AEP (emergency notifications in stand-alone program).** Emergency notifications section from AEP are duplicated and included as functional sections along with all other functional sections to a new single comprehensive stand-alone notification-specific program.

Option 3



- **There is no AEP.** Airports either make revisions to their existing notification program or they make the decision to develop a single comprehensive stand-alone notification-specific program.

RESULTS INTO ACTION!

When?

Program Management Development Chapter 2

- Secure senior management approval
- Develop a Project Management Team
- Consider:
 - ❖ A Project Sponsor
 - ❖ A Steering Committee
 - ❖ A Program Planning Team
 - ❖ A Stakeholder committee

Implement/Manage/Improve Program Chapter 7

- Is there a rollout strategy plan with:
 - ❖ A timeline
 - ❖ A training plan and educational materials
 - ❖ A formal post-rollout evaluation plan
- Is there a continuous improvement cycle with:
 - ❖ A stakeholder suggestion program
 - ❖ A plan to evaluate significant events

Formalize Program Chapter 6

- Follow the NIMS/31C format
- Provide an approach for the development of a stand-alone notification-specific program
- Make recommendations for additional functional sections

Develop Program Chapter 5

- Set priorities and make decisions
- Understand all regulatory/legal implications
- Establish and write:
 - ❖ Specific goals and measurable objectives
 - ❖ Needed agreements
 - ❖ Policies and procedures

Needs Assessment Chapter 3

- Develop internal and external stakeholder groups
- Assess effectiveness of current systems, methods, and/or tools
- Assess notification needs for:
 - ❖ Situations/events
 - ❖ All categories of notifications
 - ❖ Physical locations

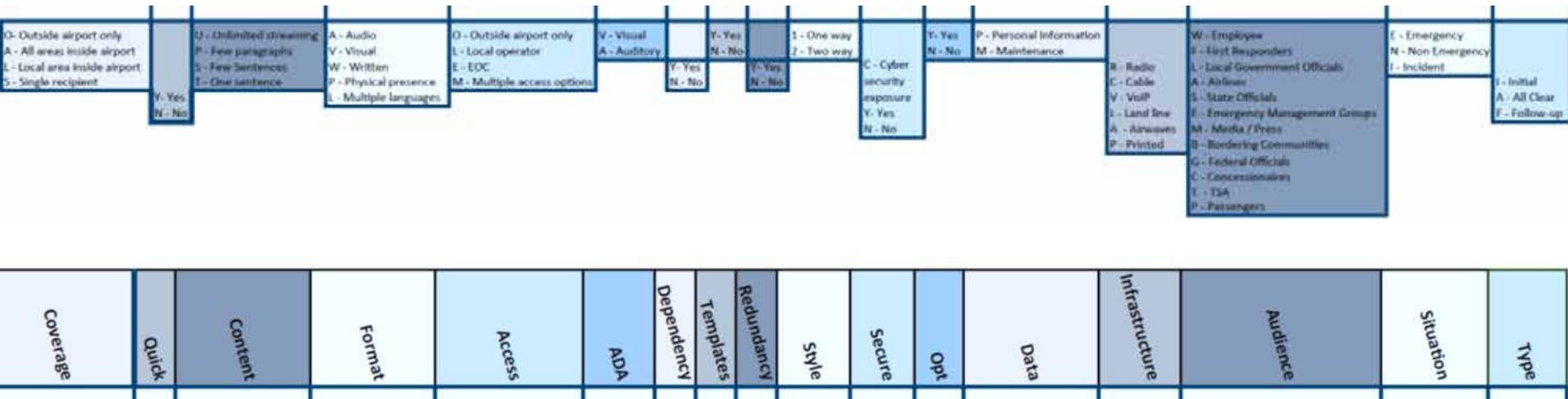
Explore Options Chapter 4

- Use surveys, work groups and/or interviews to gather information
- Explore:
 - ❖ Internal/external partnering opportunities
 - ❖ Functionalities of systems, methods, tools
 - ❖ Methods to address notification gaps

Developing the Program for Results

When?

- Q Review, Describe and SWOT
- Tools and Methods for Airport Operators to Utilize
- Q 18 types of Notification Options
- Q 15 characteristics of the Method for Optimal Use
- Q 2-12 Usages, Types or 'Reasons' for Use



RESULTS INTO ACTION!

When?

Resource NA-1a



(Customize table/add rows as necessary)

INTERNAL AND EXTERNAL STAKEHOLDER GROUPS TO CONSIDER AS RECIPIENTS OF NOTIFICATIONS			
	Applies	Does Not Apply	Not Sure
Internal			
Airport employees			
Airline employees			
Airport concessionaires			
Federal work groups, TSA, FAA, CBP employees			
Airport tenants			
Airport service providers, fuelers, ground handlers, cargo handlers, etc.			
Partnering relationships			
The traveling public			
Fixed-base operators (FBOs)			
Airport ground transportation providers			
Military groups			
On-airport first responders			
Executive management			
Other			
Other			
Other			
External	Applies	Does Not Apply	Not Sure
management agencies			

RESULTS INTO ACTION!

When?

Resource NA-2a



(Customize table/add rows as necessary)

AIRPORT ASSESSMENT OF RISKS NEEDING NOTIFICATIONS—CHECKLIST

Emergency Notifications	Event	Notification Applies Here	Notification Does Not Apply Here	Comments
	Ice storm			
	Fuel fire			
	Structural fire			
	Wildfire			
	Flood			
	Hurricane			
	Earthquake			
	Blizzard			
	Landslide			
	Sandstorm/dust storm			
	Tidal wave/tsunami			
	Lightning activity			
	Tornado			
	Volcanic eruption			
	Wind-driven water (storm surge)			
	Windstorm			
	Active shooter			
	Bomb threat			
	Bomb event			
	Violent crime			

RESULTS INTO ACTION!

When?



Resource NA-4/Part 2a

(Determining who at the airport should be responsible for sending notifications)
(Customize table/add rows as necessary)

AIRPORT DEPARTMENT/SECTION/PERSON—RESPONSIBILITIES			
Department/Section/Person	Emergency	Incident	Non-Emergency
Airport operations			
Police			
Fire			
Public relations/public information officer			
Human relations/personnel			
Facility/maintenance			
Planning			
Engineering			
Technology			
Security			
Directors			

RESULTS INTO ACTION!

When?

Resource NA-7a



This worksheet may help narrow down areas of concern and address important program issues.

(Customize table/add rows as necessary)

CURRENT NOTIFICATION CAPABILITIES—WORKSHEET

Q1	Do notifications currently reach all areas where employees work or congregate? If not, what areas need to be addressed?
<hr/> <hr/> <hr/>	
Q2	Do notifications currently reach all areas frequented by the public? If not, what areas need to be addressed?
<hr/> <hr/> <hr/>	
Q3	Are current notification methods adequate in the following areas? If not, what improvements can be made?
<ul style="list-style-type: none">• Considering ambient noise levels• Reaching employees in vehicles• Sufficient transition range• Frequency limitations• Transmission blocking conditions	
<hr/> <hr/> <hr/>	

RESULTS INTO ACTION!

When?



RESULTS INTO ACTION!

When?

-  Green indicates a “Quick Win,”
-  Yellow indicates a “Reasonable” tool or method, and
-  Red indicates that “More Justification” is suggested.

Consider the Audience

Where?

Social Media

Type	Initial <input checked="" type="checkbox"/> Follow-up <input checked="" type="checkbox"/> All-Clear <input checked="" type="checkbox"/>
Situation	Emergency <input checked="" type="checkbox"/> Incident <input checked="" type="checkbox"/> Non-Emergency <input checked="" type="checkbox"/>
Audience	Airlines <input checked="" type="checkbox"/> Media <input checked="" type="checkbox"/> Bordering Communities <input checked="" type="checkbox"/> Local Gov't. Officials <input checked="" type="checkbox"/> State Officials <input checked="" type="checkbox"/> Federal Officials <input checked="" type="checkbox"/> Passengers <input checked="" type="checkbox"/>
Infrastructure	Radio <input checked="" type="checkbox"/> Land line <input checked="" type="checkbox"/> Airwaves <input type="checkbox"/> Cable <input checked="" type="checkbox"/> VoIP <input type="checkbox"/> Printed <input type="checkbox"/>
Data	Does not apply
Opt	Yes
Secure	Cyber Security Exposure
Style	2 Way
Redundancy	No
Dependency	No
ADA	Auditory <input checked="" type="checkbox"/> Visual <input checked="" type="checkbox"/>
Access	Multiple Access Options
Format	Audio <input checked="" type="checkbox"/> Multiple Languages <input checked="" type="checkbox"/> Visual <input checked="" type="checkbox"/> Written <input checked="" type="checkbox"/> Physical Presence <input type="checkbox"/>
Content	Up to a Few Paragraphs
Quick	No
Coverage	Outside Airport, All Areas Inside Airport, Specific Areas Inside Airport, Single Recipient



Pick up Your Copy Today

Where?

Recap

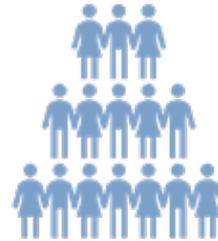
Who: **Audience**

What: **Topics to Notify**

Where: **What method to Send**

When: **To Send Notifications**

Why: **Operational Support**

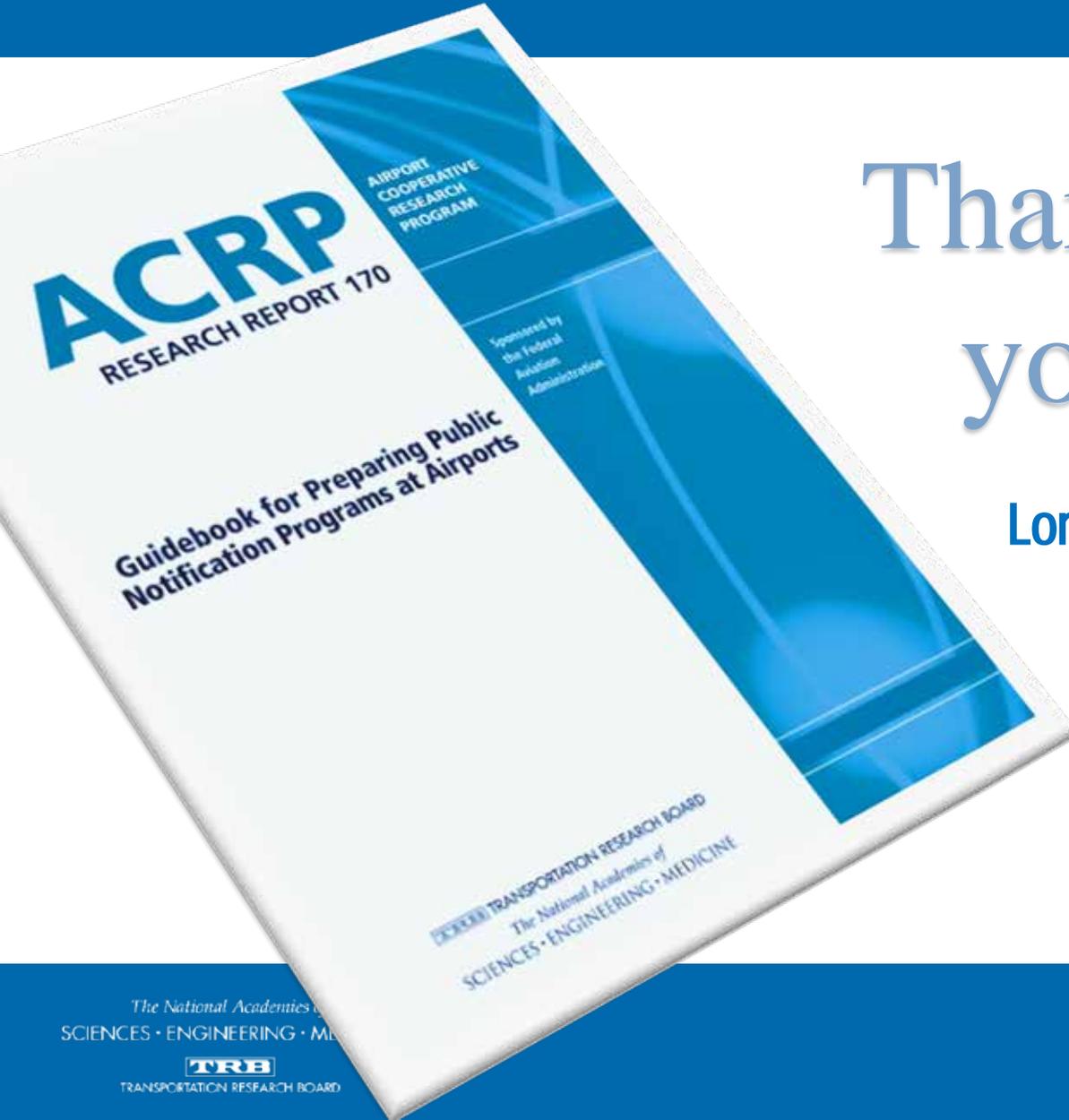


<http://www.trb.org/Publications/Blurbs/175904.aspx>

Who?

Questions from You?

FOR ADDITIONAL INFORMATION



Thank you for your time!

Lorena@SSInstruction.com

ACRP Synthesis Report 101

Communication Strategies for Airport Passenger Access and Mobility

Shu Cole, Ph.D.
Steve Mayers, C.M., IAP

Shu Cole, Ph.D. Principal Investigator

○ Director of PATH lab:
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○ Indiana University School of
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○ Steve Mayers, C.M, IAP

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○ ADA and Title VO Coordinator

○ Hartsfield-Jackson Atlanta
International Airport



ACRP Synthesis 101 Oversight Panel

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Jon A. Sanford, *Georgia Institute of Technology, Atlanta, GA*

William J. Sproule, *Michigan Technological University, Houghton, MI*

Stephen C. Wareham, *Landrum & Brown, Apple Valley, MN*

Vanessa Balgobin, *FAA Liaison*

Jonathan Torres, *FAA Liaison*

Gail R. Staba, *TRB Senior Program Officer*

Purpose

- Document the current services and communication tools used by U.S. airports to provide information for flights, airport facilities, amenities, services and programs to travelers with cognitive and sensory needs, aging travelers, and travelers with limited English proficiency.
- Discuss key to successful communication to passengers with accessibility needs.

Methods

Q Synthesis of existing literature on the U.S. air travel industry

Q Semi-structured interviews with representatives from:

§ 15 airports: 10 large hubs, 3 medium, 2 small airports

§ 5 airlines

§ 6 community groups that represent people with disabilities



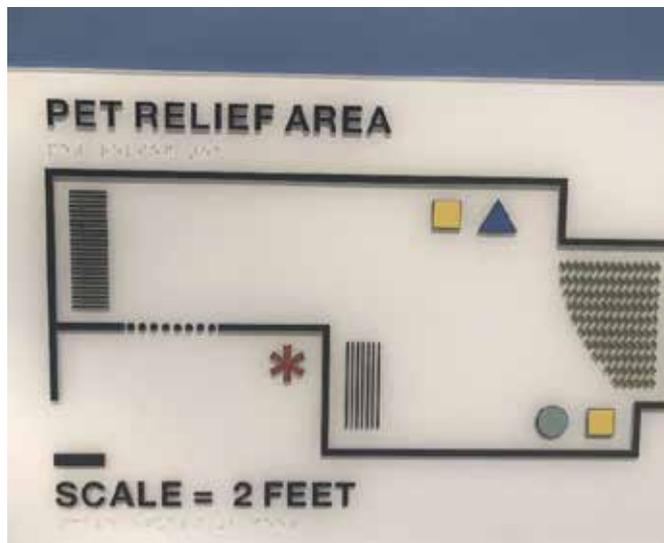
Results: Airport Services and Communication Tools (1)

Visual Information and Communication

○ Static signage

§ Use black background with neural-colored fonts

§ Use universal and newly developed symbols along with braille



Airport Services and Communication Tools (2)

Visual Information and Communication

□ Digital Signage:

§ Brighter than static signs

§ Flexible for content and language changes





Airport Services and Communication Tools (3)

Visual Information and Communication

○ Interactive directory

§ Search for flight information and airport facilities and services on a digital screen

○ Visual paging

§ Display customer paging information on FIDs



Airport Services and Communication Tools (4)

Visual Information and Communication

○ Real-time information

§ About flights, wait time at TSA and shuttle services, and availability of parking and bathrooms



Airport Services and Communication Tools (5)

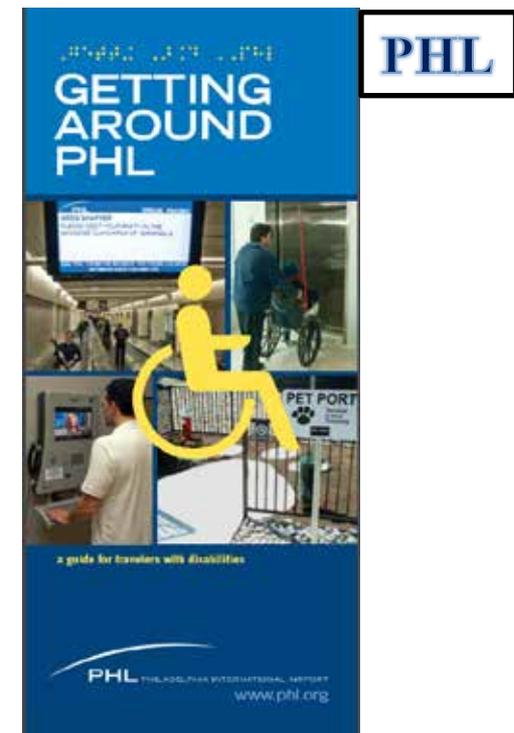
Visual Information and Communication

○ Smart color-coded LED lights

§ Inform passengers of activates by corresponding colors of lights in gate areas.

○ Brochures

§ For different market segment



Airport Services and Communication Tools (6)

Auditory tools and audio Communication

- PA system, Public TDD/TTY phone
- Hearing loop system or device
- § System installed or portable device

SEA



7:05 AM	Oct 07	DEPARTURES	7:08 AM	Oct 07	DEPARTURES	7:08 AM	Oct 07	DEPARTURES	7:08 AM	Oct 07	DEPARTURES
7:05 AM	Alaska	2295	7:30 AM C2F	On-Time	Alaska	2295	7:30 AM C2F	On-Time	Alaska	2295	7:30 AM C2F
7:05 AM	Delta	1857	9:30 AM 87	On-Time	Delta	1857	9:30 AM 87	On-Time	Delta	1857	9:30 AM 87
7:05 AM	Alaska	2453	9:00 AM C20F	On-Time	Alaska	2453	9:00 AM C20F	On-Time	Alaska	2453	9:00 AM C20F
7:05 AM	Alaska	38	8:30 AM C17	On-Time	Alaska	38	8:30 AM C17	On-Time	Alaska	38	8:30 AM C17
7:05 AM	Alaska	2644	10:10 AM 830	On-Time	Alaska	2644	10:10 AM 830	On-Time	Alaska	2644	10:10 AM 830
7:05 AM	Southwest	4928	10:00 AM 812	On-Time	Southwest	4928	10:00 AM 812	On-Time	Southwest	4928	10:00 AM 812
7:05 AM	Alaska	145	8:20 AM C18	On-Time	Alaska	145	8:20 AM C18	On-Time	Alaska	145	8:20 AM C18
7:05 AM	Alaska	7066	9:00 AM 511	On-Time	Alaska	7066	9:00 AM 511	On-Time	Alaska	7066	9:00 AM 511
7:05 AM	Alaska	851	9:45 AM 101	On-Time	Alaska	851	9:45 AM 101	On-Time	Alaska	851	9:45 AM 101
7:05 AM	United	3951	8:05 AM A8	Minor 1:00 PM	United	3951	8:05 AM A8	Minor 1:00 PM	United	3951	8:05 AM A8
7:05 AM	Southwest	5054	8:25 AM 88	On-Time	Southwest	5054	8:25 AM 88	On-Time	Southwest	5054	8:25 AM 88
7:05 AM	Alaska	500	10:00 AM 84	On-Time	Alaska	500	10:00 AM 84	On-Time	Alaska	500	10:00 AM 84
7:05 AM	Alaska	40	7:25 AM 818	New 7:30 AM	Alaska	40	7:25 AM 818	New 7:30 AM	Alaska	40	7:25 AM 818
7:05 AM	Alaska	81	7:45 AM 82	New 7:35 AM	Alaska	81	7:45 AM 82	New 7:35 AM	Alaska	81	7:45 AM 82
7:05 AM	Alaska	479	8:30 AM 83	On-Time	Alaska	479	8:30 AM 83	On-Time	Alaska	479	8:30 AM 83
7:05 AM	Alaska	3452	8:45 AM C26	On-Time	Alaska	3452	8:45 AM C26	On-Time	Alaska	3452	8:45 AM C26
7:05 AM	Alaska	45	7:25 AM 818	New 7:30 AM	Alaska	45	7:25 AM 818	New 7:30 AM	Alaska	45	7:25 AM 818
7:05 AM	Alaska	843	9:45 AM C17	On-Time	Alaska	843	9:45 AM C17	On-Time	Alaska	843	9:45 AM C17
7:05 AM	Alaska	993	9:00 AM 84	On-Time	Alaska	993	9:00 AM 84	On-Time	Alaska	993	9:00 AM 84
7:05 AM	Aeromexico	4713	10:10 AM A2	On-Time	Aeromexico	4713	10:10 AM A2	On-Time	Aeromexico	4713	10:10 AM A2
7:05 AM	Delta	2135	7:55 AM 87	On-Time	Delta	2135	7:55 AM 87	On-Time	Delta	2135	7:55 AM 87
7:05 AM	Alaska	5086	8:00 AM 837B	On-Time	Alaska	5086	8:00 AM 837B	On-Time	Alaska	5086	8:00 AM 837B
7:05 AM	Alaska	3354	8:30 AM C2	On-Time	Alaska	3354	8:30 AM C2	On-Time	Alaska	3354	8:30 AM C2
7:05 AM	Alaska	1158	9:30 AM C3	On-Time	Alaska	1158	9:30 AM C3	On-Time	Alaska	1158	9:30 AM C3
7:05 AM	Delta	128	8:53 AM 83	On-Time	Delta	128	8:53 AM 83	On-Time	Delta	128	8:53 AM 83
7:05 AM	Alaska	2119	7:30 AM	Cancelled	Alaska	2119	7:30 AM	Cancelled	Alaska	2119	7:30 AM
7:05 AM	Delta	3123	8:00 AM 81	On-Time	Delta	3123	8:00 AM 81	On-Time	Delta	3123	8:00 AM 81
7:05 AM	Alaska	36	10:10 AM 88	On-Time	Alaska	36	10:10 AM 88	On-Time	Alaska	36	10:10 AM 88
7:05 AM	Alaska	771	8:30 AM 836	On-Time	Alaska	771	8:30 AM 836	On-Time	Alaska	771	8:30 AM 836
7:05 AM	Alaska	2548	7:40 AM C18D	On-Time	Alaska	2548	7:40 AM C18D	On-Time	Alaska	2548	7:40 AM C18D
7:05 AM	Southwest	5304	8:05 AM 88	On-Time	Southwest	5304	8:05 AM 88	On-Time	Southwest	5304	8:05 AM 88
7:05 AM	Southwest	5584	8:25 AM 86	On-Time	Southwest	5584	8:25 AM 86	On-Time	Southwest	5584	8:25 AM 86
7:05 AM	Alaska	628	7:30 AM	On-Time	Alaska	628	7:30 AM	On-Time	Alaska	628	7:30 AM
7:05 AM	American	2748	7:25 AM 525	On-Time	American	2748	7:25 AM 525	On-Time	American	2748	7:25 AM 525

Source: <http://www.portablehearingloop.com/>

Airport Services and Communication Tools (7)

Auditory tools and audio Communication

- Video relay services and video phones
- ASL interpretation app



Airport Services and Communication Tools (8)

Verbal Communication

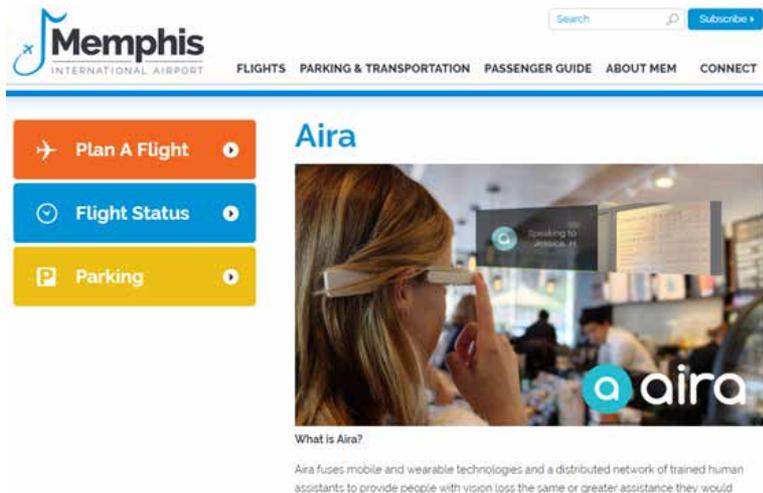
○ AIRA

§ Live service for instant access to visual information

○ Customer service agents & ADA/Title VI officers

○ Indoor navigation apps

○ Multilingual staff and Language Line Services



The screenshot shows the Memphis International Airport website. The header includes the airport logo, a search bar, and a subscribe button. The main navigation menu lists: FLIGHTS, PARKING & TRANSPORTATION, PASSENGER GUIDE, ABOUT MEM, and CONNECT. On the left, there are three prominent buttons: 'Plan A Flight' (orange), 'Flight Status' (blue), and 'Parking' (yellow). The main content area is titled 'Aira' and features a photograph of a woman wearing a white AR headset. Below the photo, the text reads: 'What is Aira? Aira fuses mobile and wearable technologies and a distributed network of trained human assistants to provide people with vision loss the same or greater assistance they would'.

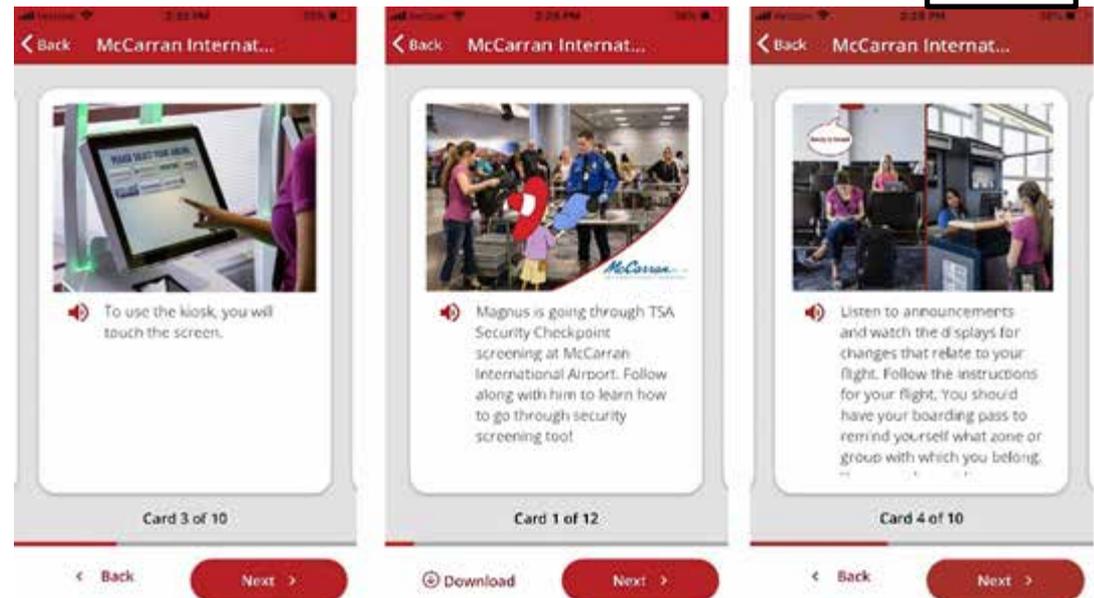


Airport Services and Communication Tools (9)

Cognitive Communication

- Wings for Autism familiarization tours
 - § Airport tours for prospective passengers to mock the air travel process
- Social Stories app on mobile phone

LAS



Airport Services and Communication Tools (10)

Improving efficiency and personalized service through technology

- Biometric passenger processing
 - § Fingerprint and facial recognition at CBP
- Robotic assistance
 - § Customer-facing robots





Tracey the Robot at Seattle-Tacoma International Airport (SEA)

Source: Port of Seattle.

Screen shot from <https://www.portseattle.org/blog/robots-are-coming-help-us> on 4/16/2019

Airport Services and Communication Tools (11)

Transitioning to from the Physical to the Digital Marketplace

Transitioning from the Physical to the Digital Marketplace

- Identification of customer feedback and comments within the digital marketplace and amalgamate it in real-time.
- Uses Classifiers: A keyword or key-phrase that represents a measurable topic.
- Benchmark against other Airports.
- Tags all relevant digital media sites (facebook, google, twitter, physical data collection devices)

tatvam
Uncover the Truth Beyond Data

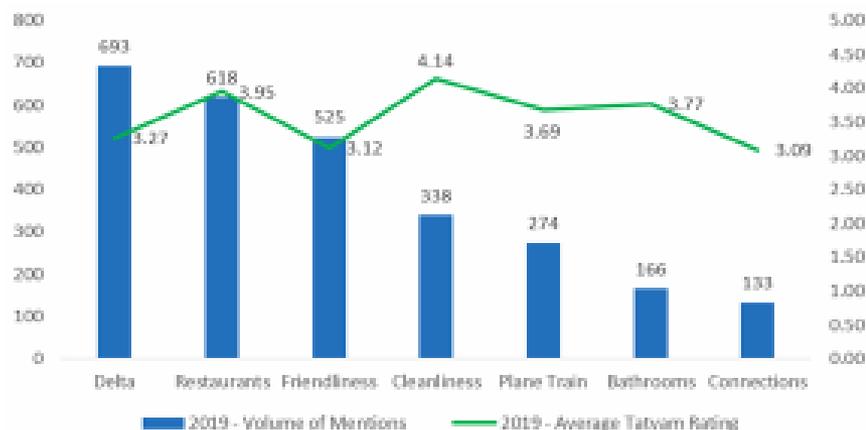
Powered by 

Observations

Enablers and Detractors

Keywords with the Highest and Lowest Tatvam Ratings

Top Rated Conversations



Bottom Rated Conversations



Tatvam Confidential (Report prepared exclusively for Hartsfield-Jackson Atlanta Airport)

Use Of Findings

Google

R Yearwood



29 Dec 2017

I recently had to request wheelchair assistance and was very dissatisfied with the service on the International side. The wheelchair assistance desk is all the way on the opposite side of where drivers drop you off. On the way back from my trip, I was told to go to the domestic side and my bags were on the International side, I had to take the airport bus to the International side which dropped us off once again on the opposite side of wheelchair assistance. Several employees walked passed me and saw that I had a cane and did not offer to assist me. Three employees were sitting on the wheelchairs on a break. The elevators by the wheelchair assistance is confusing and does not have labels for the floors on the inside of the elevator so people kept getting off on the wrong floor and I waited an additional 10 minutes to catch an elevator. All of this is unacceptable. The busiest airport in the world needs to get their stuff together!!!

Wait Time

Bus

Wheelchair

Staff

Escalator

○ Know who your Enablers and Detractors are.

○ Set thresholds for change.

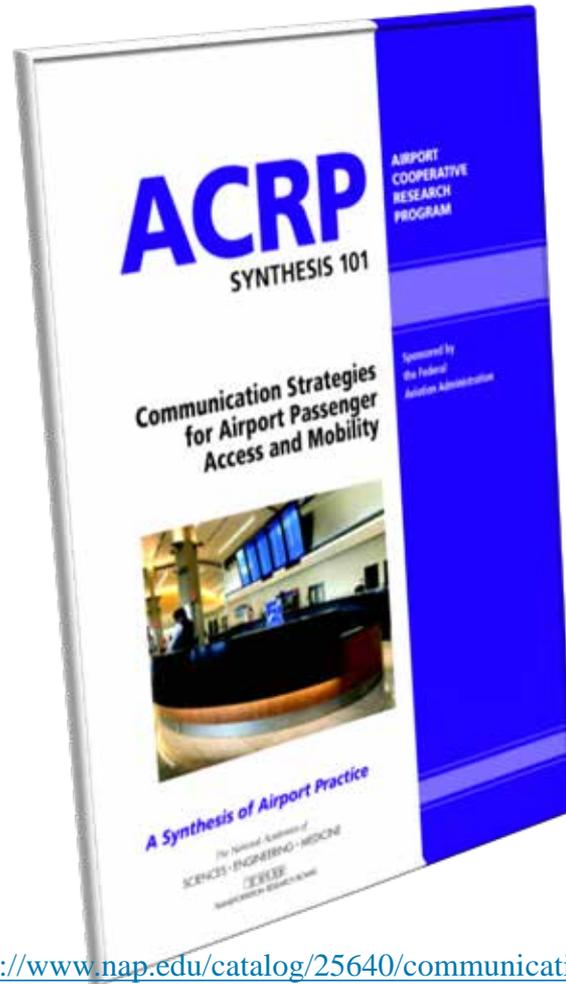
○ Aides in the development of architectural barriers report.

○ Create Service Level Agreements with partners.

Key to success

- Include accessibility in the customer service mission and future planning
- Having an internal champion to ensure buy-in
- Actively Listen to customers through an ADA voice of the customer program (include the Digital Marketplace)
- Be on the lookout for innovation
- Create a culture of empathy

FOR ADDITIONAL INFORMATION



<https://www.nap.edu/catalog/25640/communication-strategies-for-airport-passenger-access-and-mobility>

Shu Cole

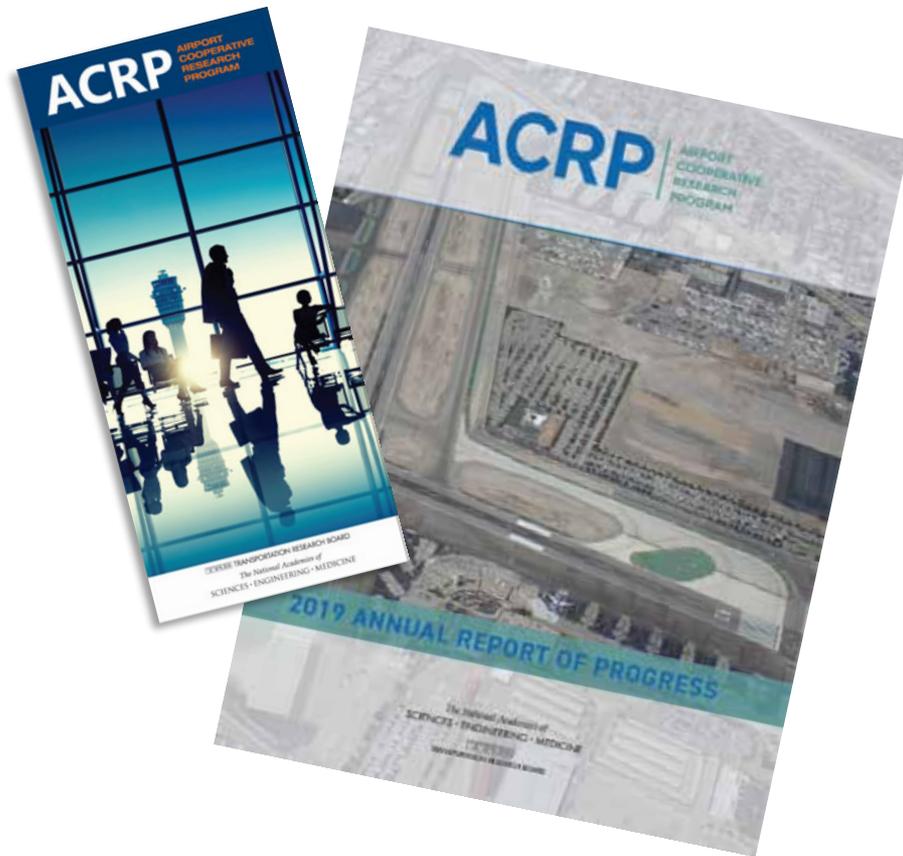
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Steve Mayers

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ACRP is an Industry–Driven Program

- Managed by TRB and sponsored by the Federal Aviation Administration (FAA).
- Seeks out the latest issues facing the airport industry.
- Conducts research to find solutions.
- Publishes and disseminates research results through free publications and webinars.



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Visit ACRP's Impacts on Practice webpage to submit leads on how ACRP's research is being applied at any airport.

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Other ACRP Research on Today's Topic

Report 157: *Improving the Airport Customer Experience*

Report 161: *Guidelines for Improving Airport Services for International Customers*

Report 177: *Enhancing Airport Wayfinding for Aging Travelers and Persons with Disabilities*

Report 201: *Airport Emergency Communications for People with Disabilities and Others with Access and Functional Needs*

Synthesis 48: *How Airports Measure Customer Service Performance*

Synthesis 73: *Emergency Communications Planning for Airports*

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Upcoming ACRP Webinars

May 21

You Can Get There From Here - Developing an Emissions Roadmap for Airports

June 17

Let's Do This Together - Collaborative Partnering for Airports

July 7

Smooth Road Ahead – Best Approaches for Applying Pavement Condition Data



Lorena
deRodriguez,
SSI Instruction

Steve
Wareham,
Landrum &
Brown



Shu Cole,
Indiana
University



Steve
Mayers,
Hartsfield-
Jackson
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ional
Airport



TRB turns 100 on November 11, 2020



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