PLANNING & DESIGN

BEYOND ADA
DESIGNING INCLUSIVE AIRPORTS THAT ENABLE ACCESS, SAFETY, AND WELL-BEING
Airport facilities, operations, and passenger experience directors are faced with the challenge of meeting the needs of a growing population of elderly passengers and passengers with disabilities. Aging infrastructure, planning, and processes that weren’t designed with these groups in mind from the beginning now impede or prevent access, safety, and well-being while traveling. Even when airports have met the Americans with Disabilities Act (ADA) standards, it is clear that passenger’s critical needs still are not addressed, and the gaps in service cause inconvenience, stress, or worse, harm.

According to Laurel Van Horn, VP Director of Programs at Open Doors Organization (ODO), “ADA guidelines are based on a very small number of people with limited types of wheelchairs and scooters.” The legislation was not founded on an inclusive approach that considered all disabilities. The ADA represents the minimum considerations, but they don’t cover everything you’ll need to consider for the passengers in your airport. This white paper will explore what’s possible when you take your facilities, operations, and commitment to passenger experience beyond ADA minimums.

Although healthier in some respects than earlier generations, this age group is subject to such chronic illnesses as cardiovascular disease, Alzheimer’s, diabetes, osteoporosis, and obesity, any of which can affect a person’s ability to navigate an airport.

In the AARP “2019 Boomer Travel Trends” report, baby boomers said they planned to spend an average of $6,621 on a total of four to five trips in 2019. For domestic travel, the majority of the trips are for summer vacations and weekend getaways. For those planning international trips, bucket list locations such as Europe, the Caribbean, and South and Central America are favorite choices. Sixty-six percent of domestic trips included air travel, and 87% of international trips did the same.

Travelers with disabilities have distinct, though often overlapping, needs with the needs of elderly travelers. For starters, people with disabilities also love to travel. Open Doors Organization is a Chicago-based non-profit that works to make travel and tourism universally accessible to people with disabilities. According to their “2020 Market Study,” between 2018-2019, 27 million adults with disabilities took 81 million leisure and business trips. They spent $29.4 billion per year during this period, and because members of this group often travel with one or more companions, that annual spend is closer to double at $58.7 billion.

“When we carried out our first nationwide study in 2002,” says Eric Lipp, ODO Executive Director, “the goal was to wake up the travel industry to the importance of this mostly underserved market segment and give them hard numbers on which to base investment decisions.”
Today, there are 61 million adults who live with at least one disability that impacts their daily lives. That’s 26% (one in four) of the American population, not including children with disabilities. According to the Centers for Disease Control and Prevention, 13.7% of people with a disability have a mobility impairment that results in serious difficulty walking or climbing stairs. People with a cognitive disability account for 10.8% of the population, and they experience serious difficulty concentrating, remembering things, and making decisions.

The combined impact of the elderly and people with disabilities on airport systems requires a level of service and consideration that goes beyond wider doorways and restroom stalls. The need for inclusive design solutions is urgent for travelers, which makes the need urgent for airports.

THE CHALLENGES OF EXCLUSIVE DESIGN

There are four main challenges that the elderly and people with disabilities face when navigating airports: fatigue, wayfinding, technology and equipment, and amenities.

FATIGUE
Standing in lines and walking long distances are part of the reality of traveling through airports. Everybody needs to queue up to check in; get through security; buy food or use the restroom; board the plane; make a connection in another airport; wait at baggage claim; and finally, wait curbside for pick-up transportation. Even then, depending on the proximity of the rental car center to the terminal, travelers wait in line again for a shuttle to take them to the center, then, lastly, they wait at the rental car desk. Depending on location and season, each of these steps could result in hours of standing and walking during a single leg of the journey.

Visualize the traveler flow through your own airport. Is there convenient seating along the primary paths of travel? Restrooms tend to be reliably located every so many feet. Is there seating similarly located? Statistically, the answer is no. Van Horn states, “Our top complaint is always the long distances to gates, long lines for waiting, and limited seating. Wherever there’s a line, or long distance, there needs to be seating nearby.”

In addition to people with mobility disabilities, people with cognitive disabilities are also impacted by long distances and wait times. Cognitive disabilities that impact memory, disorientation, or distraction can cause travelers to struggle to maintain the focus required to navigate long distances or time spans.

WAYFINDING
Unclear or redundant wayfinding and directional signage can lead travelers in the wrong direction, costing them precious energy, patience, and time if they’re rushing to make a connection. Frequent flyers will have an easier time finding their way around airports because they know where they’re going with minimal or little reliance on signage. They know how to find the nearest flight board to check their flight

Flow-through “smart elevators” with enhanced visual wayfinding

“The main cause of falls in airports is escalators -- people who shouldn’t be getting on them because alternatives aren’t easily available.”
Laurel Van Horn, ODO VP Director of Programs
status, the location of the water fountain and restroom, and what food to expect from their favorite airport restaurant. Flyers who are new to your airport, or those who struggle to remember these details, will have a much harder time making their way, and feeling comfortable doing so. They rely heavily on signage to assist them. Even frequent flyers with good memories will have to recalibrate their mental maps when airports undergo construction projects.

Language is also an important barrier when it comes to signage. According to Scientific American, humans speak over 7,000 languages. To include text translations of wayfinding messages in all languages is impractical, yet these messages need to be accessible and easily understood by all. “The more we can make wayfinding intuitive and not have to rely on signage, it’s going to work better for everybody,” says Van Horn. “Clearly we need to move toward more pictograms and Universal Design.”

Difficulty in understanding terminology in an unfamiliar, and often stressful, environment can severely impede or distress travelers regardless of age or ability.

TECHNOLOGY AND EQUIPMENT
Technology has a large role to play in either supporting or hindering travelers. Self-service kiosks, for example, can provide an effective method of requesting assistance. If the technology is unfamiliar to the traveler, however, or difficult to use, or not available in the right language, this solution leaves gaps in service.

Other technology solutions that are designed to help travelers, such as moving walkways, also only end up helping some, while taking up space that could be put towards broader, more equitable use. Travelers who move at a slower pace may not feel confident stepping onto a moving walkway. Travelers who are blind, have low vision, or a vestibular disability that causes dizziness, vertigo, or imbalance will want to avoid this option as well. With tight budgets, you don’t enter into these equipment purchasing decisions lightly, so you’ll want to be confident that the return on investment will be high. Is it high enough? Could alternative design and technology solutions make it higher?
AMENITIES
Ease of use of restrooms features highly on the list of challenges for the elderly and people with disabilities. The ADA provides provisions for including a certain number of handicap accessible stalls, but a few per restroom aren’t enough. People with physical disabilities need that additional space, especially if a companion needs to assist them inside the stall, but so do people with a lot of luggage, or families traveling with small children. People with cognitive and emotional disabilities also benefit from more space, especially considering those who suffer from claustrophobia, germophobia, post-traumatic stress disorder (PTSD), or Autism Spectrum Disorder. Elderly travelers experience mobility issues that benefit from a larger space in which to move comfortably. The number of travelers that benefit from that single innovation is staggering.

Help at baggage claim is also a pain point for these individuals. Rolling heavy suitcases that are already on the ground is one thing, but lifting them off a moving, sloped baggage carousel while surrounded by a crowd of people is another. Travelers with blindness or mobility disabilities that limit lifting, such as arthritis or osteoporosis, will need assistance.

SOLVING FOR INCLUSIVE DESIGN
The challenges mentioned above disproportionately impact the elderly and people with disabilities. When we consider that 16% of the population (and growing) is elderly, which overlaps with the 26% of the adult population that lives with a daily disability, that’s a significant portion of the population that needs additional consideration and accommodation during airport travel.

There are a number of tried and true solutions to these challenges. From the ACRP “Impacts of Aging Travelers on Airports” report, airports should provide:

- Staffed information kiosks at entrances to support wayfinding
- Seating in lobbies, concourse areas, baggage claims, and curbside to support travelers with fatigue
- Alternatives to escalators such as sloped floors, ramps, and pass-through elevators to support travelers with mobility needs
- Wider restroom stalls and more family restroom options for travelers who need more horizontal space, or who need companion care

But how do you know which solutions will have the highest impact on user needs, and result in high returns on investment over the long-term? Van Horn advises, “If the airlines, and airports, and architects aren’t all working together, then you’re still going to have the kinds of gaps that we’re seeing in our research.”

HOW MSP INTERNATIONAL EMBRACED INCLUSIVITY
In 2007, the Minnesota Commission of the Deaf, DeafBlind and Hard of Hearing presented Phil Burke, the facilities director of the Minneapolis-St. Paul International Airport at the time, and the director of operations with an ultimatum: bring MSP up to code or we’re going to file a lawsuit. “Our first reaction was to fight back,” Burke remembers. “But overnight we thought, wait a second, that’s probably not the right approach. We decided to take a partnership approach to this and work with them to address our gaps.”

Fast forward 13 years, Burke is now the MSP Assistant Director of Customer Experience. One of the first things he did in his new role was create the Travelers with Disabilities Advisory Committee (TDAC) that meets monthly to discuss designs and proposed updates to the airport. “We’re to the point now where we don’t make design decisions without their input. We don’t make assumptions anymore. We don’t just say, well, this is up to code, so it’s OK. We say, ‘what does TDAC think?’ And we make decisions based on their feedback.”

Today, TDAC is a critical piece of the puzzle to help MSP move beyond code minimums and exceed their passengers’ expectations.
BENEFITS OF INCLUSIVE DESIGN

Inclusive design, or Universal Design, is the process of designing “an environment so that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability,” according to the National Disability Authority. By designing spaces with as many people as possible in mind from the beginning, you ensure universal access to your airport. Jens Vange, Senior Associate at Alliiance, and co-author of the ACRP “Guidebook for Airport Terminal Restrooms Planning and Design,” said the important thing is to keep the path of accommodation to a minimum. “It’s just simplifying the experience or process so no person has to have an unusually arduous way to experience a space. That’s how we think about design.”

Universal Design offers benefits to the individual as well as society as a whole, including:

- Supporting independent access, freeing travelers from needing to request assistance
- Providing single solutions that work for everyone instead of separate solutions that segregate or create a sense of otherness
- Supporting holistic well-being by designing spaces to be comfortable, low stress, and healing

As Burke likes to say, “At the end of the day, it’s just the right thing to do. Market trends, and profitability are all nice to have. But at the end of the day, right is right, and I want to try to make sure everybody is treated equitably.”

“WHY DO WE DO THIS? AT THE END OF THE DAY IT’S JUST THE RIGHT THING TO DO. MARKET TRENDS AND PROFITABILITY ARE ALL NICE TO HAVE, BUT AT THE END OF THE DAY, RIGHT IS RIGHT, AND I WANT EVERYBODY TO BE TREATED EQUITABLY.”

PHIL BURKE, MSP ASSISTANT DIRECTOR OF CUSTOMER EXPERIENCE
WHAT TO LOOK FOR IN A UNIVERSAL DESIGN PARTNER

As you embark on projects to update your airport to support the growing wave of elderly travelers and travelers with disabilities, you’ll need a design partner that understands you, your passengers, and will engage with you side-by-side. Here are a few factors to consider:

- **Strong relationship focus:** A good design partner will take the time to truly understand you, your goals, and your challenges. They should do the same for your passengers, employees, and construction partners. Having a strong relationship with your designer means that you can be open, honest, and see each other eye-to-eye.

- **Bias towards measurable results:** Seek a partner that uses data to design and inform their recommendations, and then performs pilot testing. The most effective way to know if a solution will work is to have your passengers, of as many abilities as possible, try it out.

- **Focus on inclusivity and whole-person wellness:** Look for a partner that designs beyond minimum standards towards the inclusion and well-being of your passengers. This requires an interconnected understanding of design processes and ways of thinking, such as how a health and well-being approach feeds seamlessly into sustainability and resiliency standards.

- **Interested in simplifying as much as beautifying:** The best, most universal solution isn’t necessarily the most complex or intricate. In fact, it usually isn’t. The third principle of Universal Design is simple and intuitive use. Simple, beautiful, and universally useful should be the goal.

- **Comfortable with experimentation and innovation:** Sometimes tried and true solutions are just the thing, but often the best approach lies between what’s been done elsewhere and what you need specifically.

Seek a partner that strives to create innovative designs that express your space and community uniqueness.

- **Focus on doing the right thing for everyone:** Choose a partner that believes in doing the right thing for everybody simply because it’s the right thing to do.

GO BEYOND ADA

To Alliiance, going beyond the ADA looks like exploring holistic wellness as a design philosophy. It includes designing for:

- Health, ergonomics, and overall well-being with a WELL certification
- Biophilia, our innate affinity to be in, or around, natural elements such as water, airflow, light, plants, and associated patterns
- Often neglected disabilities such as sensitivity to fragrance, light, sound, or texture
- Stress-reduction, mental wellness, and helping passengers cultivate calm

“It’s interesting to think about the ADA in the context of physical, emotional, and cognitive well-being,” says April Meyer, Alliiance Principal. “Each play into
our concept of going beyond ADA, and members of our team are trained in the related specialties and nuances.”

Since 1978, Alliiance has provided comprehensive landside and airside planning, architectural and design services to the aviation industry. With two ii’s right in the center of our name, this represents working together with our clients in partnership – side by side, face to face, eye to eye.

Our core design services include terminal area feasibility and master planning, passenger flow analysis, phased development planning, aircraft parking optimization and award-winning concession program development leadership.

We employ processes that bring out the unique attributes of our clients and employ innovative design solutions that emphasize the social and environmental aspects of our client’s community.

Our in-depth research, including ADA audits, and early design tools enable us to fully understand both the social/cultural and physical/global contexts of our clients to provide important gateways with responsive design and a memorable sense of place. We’re a firm that cares deeply about justice and holistic individual and societal well-being.

To explore how we can help you take your project beyond minimum design standards to exceed the needs of your passengers, visit us at www.alliiance.us, email us at epeterson@alliiance.us, or call us at 612.874.4102.
ABOUT ALLIIANCE

Alliiance is a team of planners, architects, and interior designers, working together to create inspired environments for people. We bring a fundamental respect for the expertise achieved with a team approach, a client-centered process, and a fondness for leading a fun and creative process where design can elevate and enrich people’s lives.

As a full-service architecture, planning, and design firm, we ally with the best engineering and specialized consulting partners to provide a comprehensive family of integrated services for our clients ranging from feasibility studies, master planning, and brand integration through design, construction, and post-occupancy project phases.

Alliiance. Uniting people and place through design.

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