

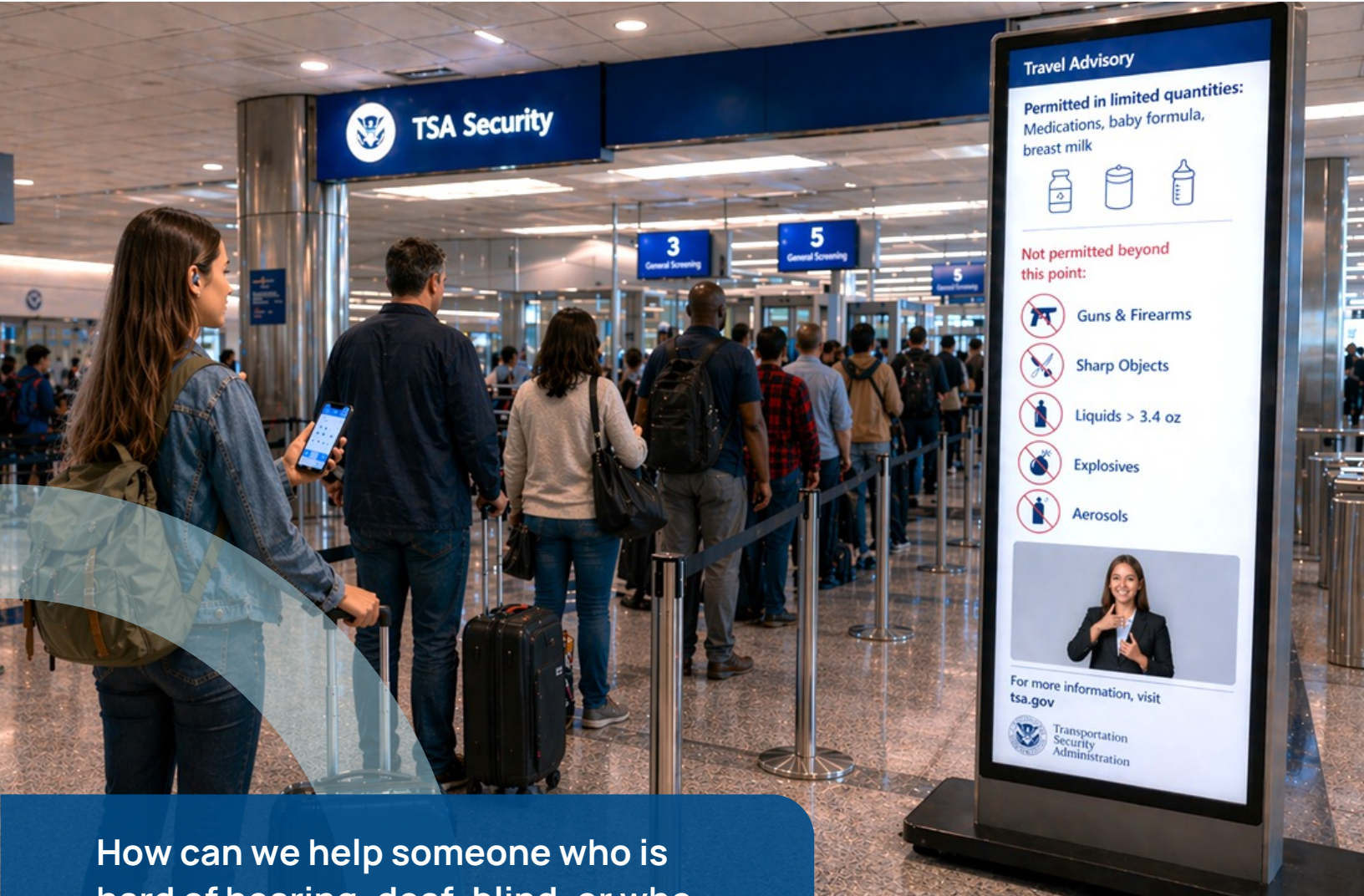
# Now Arriving Digital Accessibility in Transportation



Advancements in audio-visual technology can connect passengers to the support they need from the time they reach the curb

# Remember the Last Time You Were in an Airport or Mass Transit Hub?

These places are chaotic. Your senses are bombarded with audio and visual stimuli while you try to absorb and process the information needed as passengers trying to reach our destination quickly, easily, and safely. Now, try to imagine doing it as someone who has a hearing, vision, or cognitive disability.



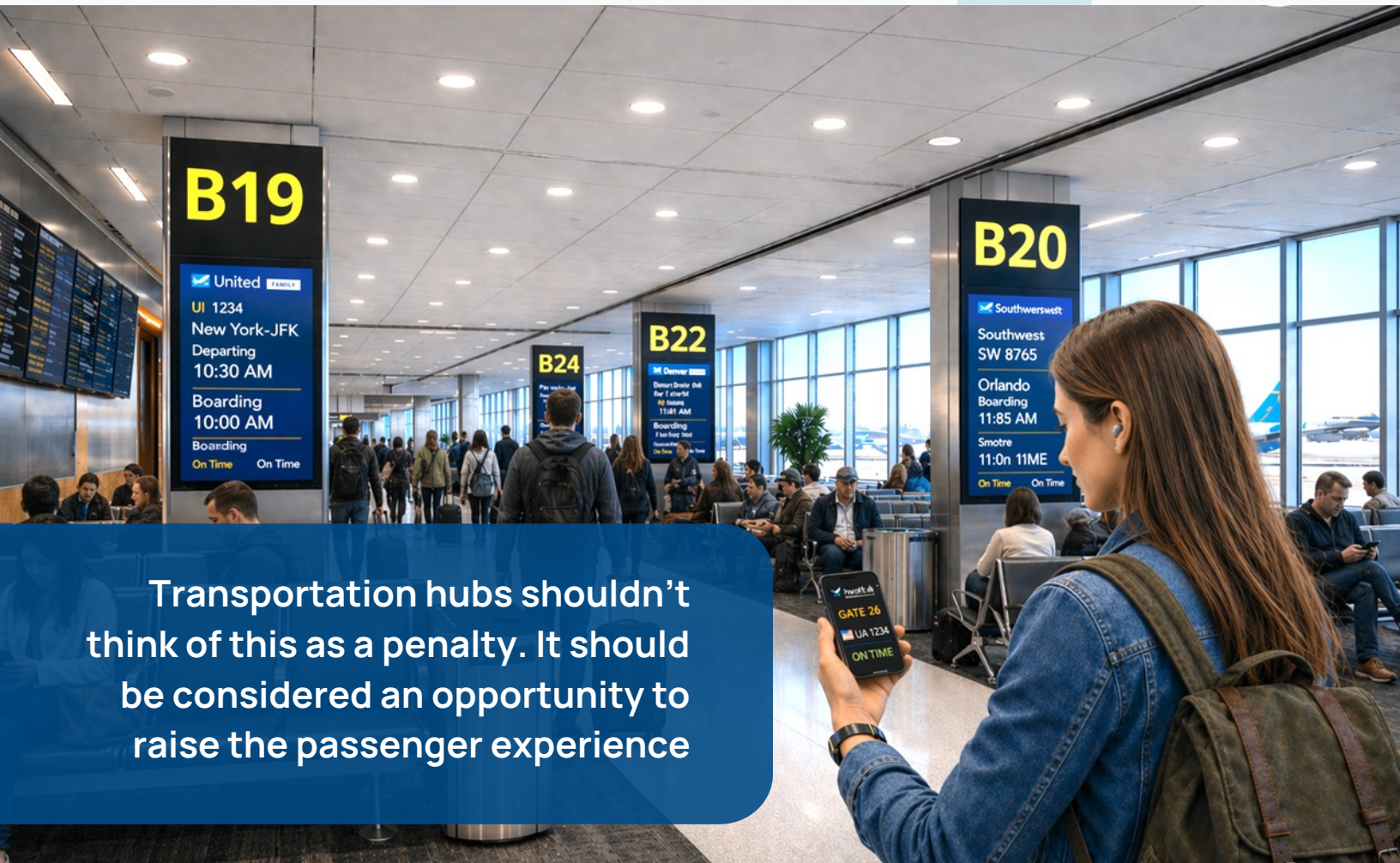
How can we help someone who is hard of hearing, deaf, blind, or who has a cognitive disorder improve their travel experience?

By unifying public address, passenger information, IPTV, and life safety systems, and connecting them with the facility's own app and WiFi network, we can create a **seamless flow of information** for all passengers including those with disabilities or who need multilingual support.

# Digital Accessibility & the Future of Inclusive Transportation

Since 2010, the Americans with Disabilities Act (ADA) has required transportation facilities to provide **accessible environments and effective communication for passengers with disabilities**. These requirements include accommodations such as *assistive listening systems, accessible visual messaging, tactile and audible wayfinding, captioning, accessible kiosks, and digital information systems* that support passengers who are deaf, hard of hearing, blind, low vision, or who have cognitive disabilities. Even so, many airports, train stations, and mass transit systems have struggled to fully implement these standards due to the complexity of integrating accessibility technology across large facilities, legacy infrastructure, multiple departments, and constantly changing passenger information systems.

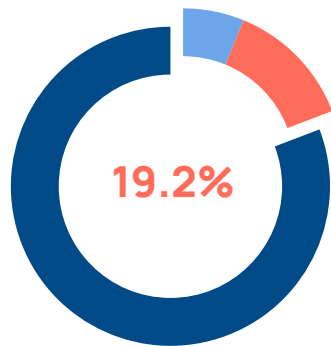
Now, beginning in **April 2026**, updates and enforcement under the ADA will place **greater emphasis on accessibility** beyond physical infrastructure and into the **digital passenger experience**. These emerging requirements, based on the Web Content Accessibility Guidelines (WCAG) 2.1 AA, affect websites, mobile applications, digital wayfinding, passenger information displays, ticketing kiosks, real-time alerts, and other digital content used throughout transportation environments. While some exceptions may apply depending on the type of organization and content, transportation operators are still required to provide “effective communication” for passengers with disabilities. This includes digital information used for ticketing, boarding, safety instructions, gate changes, service disruptions, emergency alerts, and wayfinding. Organizations that fail to comply may face public complaints, lawsuits, corrective action requirements, and potential civil penalties.



Transportation hubs shouldn't think of this as a penalty. It should be considered an opportunity to raise the passenger experience

# The Size of the Sensory Needs Market

Sensory accessibility is not just compliance – it is a revenue opportunity. Millions of Americans are deaf, hard of hearing, blind, or living with low vision. Travelers with disabilities already account for nearly **\$50 billion in annual U.S. travel spending** on their own, and more than **\$100 billion with companions** included. By investing in *assistive listening, smarter wayfinding, and sign-language translation*, airports, rail operators, and transit agencies can **remove barriers for sensory-disabled travelers, improve safety and confidence, and win more trips**, more repeat visits, and more on-site spending from a large, valuable, and too-often overlooked market.



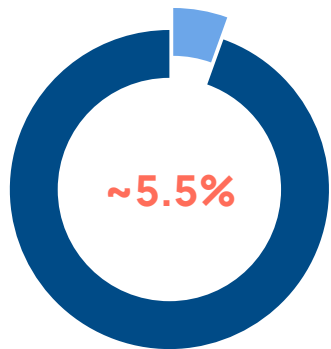
## Hearing Loss

**6.2%** in the U.S. deaf or have serious difficulty hearing (CDC)

**13%** have noticeable level of hearing loss

Strongly increases with age:

- **22%** (65–74 years)
- **55%** (75+)



## Vision Disabilities

**5.5%** of U.S. adults have serious difficulty seeing

About **7 million** people have vision impairment

Among older adults (70+), **25%+** have impairment

## Did You Know...

For the deaf community, **sign language is their primary and most natural language**, while written English is often a second language. As a result, relying only on closed captioning does not always provide the same level of clarity or comprehension as sign language interpretation.

Sign languages such as **American Sign Language (ASL)** are visual languages with their own grammar, sentence structure, and cultural context that differ significantly from written English.

When integrated into an airport's audio-visual systems, software like **Kara Technologies** can provide near real-time sign language and text translation for public address, rides, and shows via on screen AI avatars. These avatars can be created to look like park employees in uniform, or even mascot characters.





For passengers with sensory or cognitive challenges, predictable information and accessible communication can dramatically reduce stress and confusion, allowing them to move through the facility more independently and comfortably

## The Revenue Opportunity for Airports

Accessibility is not just a compliance issue; it is a **significant business opportunity**.

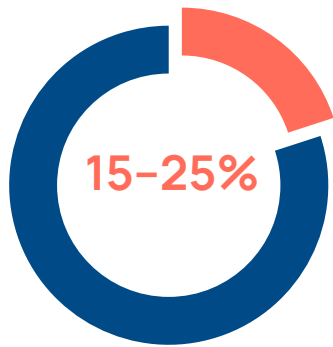
An airport generates revenue in many ways. One of the biggest is the success of its concessions. However, in a typical design, concessions are not considered part of the airport technology ecosystem. They rarely support travelers with disabilities or are connected to passenger information.

When unified, the airport's QSYS public address system, Listen WiFi, and TriplePlay IPTV, provide all passengers with more information so they can move easily through the terminals and take time to relax. This translates to them spending more money in concessions.

When designed and integrated correctly, Wi-Fi-based ADA support technologies provide all passengers with more information, decrease stress levels, and result in increased revenue

# The Need for Multilingual Passenger Services

An additional advantage of Wi-Fi-based ADA support systems is that the same infrastructure can deliver multilingual content. Once a platform exists to stream public address, captions, audio descriptions, and navigation assistance to mobile devices, it can easily support multilingual passengers and guests through near real-time translation, including sign language.

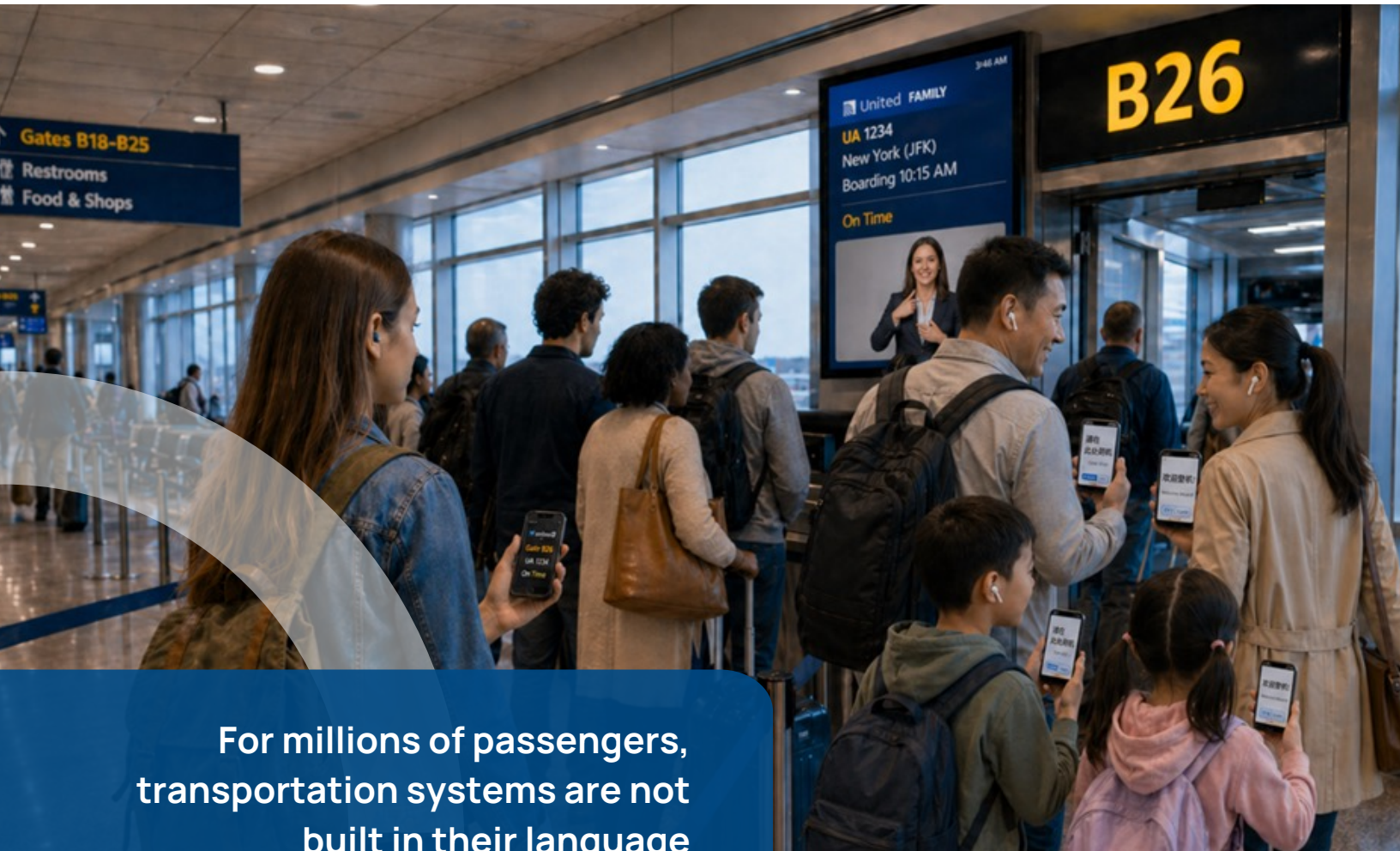


## Limited English Proficiency (LEP)

25-30M people in the U.S. have limited English proficiency

15-25%+ in major transportation hubs – Airports, rail stations, cities

This capability significantly **improves the experience for international passengers**, a demographic that represents an important source of revenue for all transportation centers. The result has dual benefits: **improved accessibility compliance and expanded global appeal**.



# Improving Safety and Navigation

Beyond passenger information and entertainment accessibility, digital ADA tools, when unified with public address, IPTV, audio-visual, life safety, and wayfinding, can also improve safety and mobility within the transportation center.

Smartphone-based accessibility systems can provide:

- Turn-by-turn accessible route navigation
- Movement times and TSA queue alerts for visitors with sensory sensitivities
- Emergency alerts in multiple accessible formats and languages
- Clear visual instructions for emergency and evacuation safety procedures



Every display in the airport is useful in an emergency, including a passenger's own cell phone - especially when that passenger has a disability

# Creating Barrier Free Transportation

Most transport centers don't fully understand the compliance requirements and how to best support their passengers with disabilities. This is where we come in. Our team begins by assessing your facility's compliance and creating an integration plan to bring you up to the latest standards.

We design and integrate ADA compliant technology solutions including.

- Audio-Visual Systems
- Wi-Fi Based Assistive Listening
- Sign Language Interpreter Software
- Public Address & Mass Notification Systems
- Closed Caption Support Systems
- Motorized Lift Interactive Displays for height accessibility
- Accessible Wayfinding Displays
- Acoustic Design

We are proud partners of these manufacturers that support people with disabilities...



## To move your facility toward its Digital Accessibility destination, contact us...



AV-ation is an Audio-Visual Consultant based just west of DC. Our team members have designed, built, and managed systems for theme parks, museums, planetariums, zoos and international airports around the world.

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Creation Networks is an Audio-Visual Integrator with offices in the SF Bay area, CA and Reno, NV. Our team specializes in designing and installing inclusive technology systems across the United States.

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