Case Study: How VRATE Empowered 2,000+ Attendees with an Accessible, Usable Map

Summary

In October 2024, the Vision Rehabilitation and Assistive Technology Expo (VRATE) purchased an Audiom map for their November conference. Within two weeks, XR Navigation transformed their inaccessible PDF exhibit hall layout into an interactive Audiom experience. For the first time, VRATE's blind organizing committee could preview and approve the exhibit layout independently. Embedded on their website, the map was used by over 2,000 blind and sighted attendees on phones and computers.

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Client Background: Vision Rehabilitation and Technology Expo

The Vision Rehabilitation and Technology Expo Association (VRATE) is a 501(c)(3) nonprofit organization based in Arizona, dedicated to enhancing the educational, vocational, and quality-of-life outcomes for individuals who are blind, have low vision, or are DeafBlind. Each year, VRATE organizes the Vision Rehabilitation and Technology Expo, a multidisciplinary conference that brings together individuals, families, medical professionals, employers, and assistive technology providers of all ages. Most of the VRATE expo organizing committee is blind or low vision.

Scope & reach:

As the largest and longest-running conference of its type in the American Southwest, VRATE routinely attracts attendees from across Arizona, including consumers, service providers, educators, employment specialists, and technology vendors who focus on vision loss and related disabilities.

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Mission & goals:

Aligned with its nonprofit mission, VRATE aims to foster self-determination, full societal inclusion, and employment readiness for its community. The event offers accessible educational tracks for all ages (from kids to seniors) and emphasizes intersectionality, addressing overlapping challenges like hearing loss. It also provides hands-on access to exhibitors showcasing the latest assistive technology and support services. VRATE features interactive workshops, seminars, keynote talks, and a diverse expo hall where attendees can test assistive technology, ranging from screen readers and video magnifiers to orientation and mobility aids.

Problem: The Inaccessible Map

The expo maps were unusable for both the VRATE team and most of their attendees. The VRATE team worked with an external vendor to help organize and coordinate the event. The exhibit hall maps provided by the external vendor were delivered as PDFs that screen readers read simply as “graphic blank.” This meant blind VRATE team members were unable to verify or approve the layout. At the event, attendees, most of whom were blind or low-vision, had no usable map.

Common accessibility issues with PDF maps included:

- Read as “graphic blank” to screen readers.
- Became blurry or distorted when zoomed 200%

Other interactive digital map providers, including MapsPeople, Mappedin, and Map Your Show were also unusable.

- The map would read as “blank” to blind screen reader users.
- The map would squash interface elements when low-vision users zoomed 200%+.
- Mobility impaired users could not use their keyboard or switch control device to activate the different features on the map.
- The map did not look or sound anything like the venue to allow autistic users to prepare mentally and emotionally as they would with a social story.

Not having a map for the expo meant that visitors would have no idea where to go once they entered the building. Visitors would need to completely rely on sighted volunteers or their previous experience of the venue to get around. Exploring the exhibit hall would be chaotic and random, and attendees may be unaware or unable to find a vendor they wanted to visit.

The Solution: Audiom

XR Navigation received the exhibit hall layout and exhibitor data in mid-October. In under two weeks, they:

- Converted the PDF to structured map data usable by interactive maps
- Illustrated the base layer
- Integrated exhibitor data into interactive feature cards
- Delivered both an embeddable map and a link to the map the VRATE team could use

Since the embed code typically yields 10X usage, the VRATE team embedded the map directly on their homepage:

https://vrate.org/expo-2024/

Result: A Map Everyone Could Use

Qualitative

- The Audiom map allowed the blind team members to independently approve the exhibit hall layout for the first time. Although the team did not make any modifications, they

could have made changes and received updates to the map in around 24 hours up until the end of the event.
- Sighted attendees appreciated the beautiful illustration, and the blind attendees were able to preview and explore the venue to orient to the space.
- Everyone appreciated they could use the map in the way that worked best for them.
- It was mind-blowing for many attendees to be able to “hear” the event map.

Quantitative

- Over 2,000 visitors used the map both before and during the event on their phones and computers.
- The VRATE Expo map won a 2025 Data Sonification Award.

“We really appreciated the timeliness, communication, and ease of working with XR Navigation to get an Audiom map for our event. They delivered an incredible map experience both our blind and sighted attendees and organizing team could equally enjoy. We will definitely work with XR Navigation in the future, and we have already recommended Audiom to other event organizers.” - David Steinmetz, VRATE board chair.

Conclusion

Thanks to Audiom, the VRATE team was able to provide an innovative and usable experience for their own team and their attendees that reflected their values and mission. A digital map your attendees can hear, read, and see is an email away. Contact:

info@xrnavigation.io

with your floorplan for a quote.