TheRide: Improving Inclusion and Access for All

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The Ann Arbor Area Transportation Authority (TheRide) in Ann Arbor, MI, is embarking on a new way to increase the independence of our riders using mobility aids such as wheelchairs.

We are partnering with the Center for Independent Living, the University of Michigan Transportation Research Institute and Q'Straint, a global leader in manufacturing wheelchair securement systems, to test virtually autonomous securement of wheelchairs, called Quantum, on ten of our buses. The Quantum systems are scheduled to be installed early this year.

Working to Address Mobility Gaps
Michigan DOT has awarded a $187,000 state grant to TheRide as part of its Michigan Mobility Challenge initiative. This initiative uses technology and innovation to address mobility gaps for seniors, persons with disabilities and veterans. The grant will allow TheRide to pilot a program for virtually autonomous wheelchair securements requiring minimal assistance.

We are currently in the process of procuring the Quantum system for installation, scheduled for February. Q'Straint experts will train TheRide's in-house staff on installation of the systems in our buses and our trainers on how to train operators. Once the initial system is installed, we will begin training operators. We will incorporate this system into our travel training curriculum and take buses to our partners in the community to launch the system for public use.

"This next generation safety feature can allow individuals with mobility devices to secure themselves in under 25 seconds with the push of a button," says Julia Roberts, planning and innovation project lead at TheRide. "Innovative transportation solutions like this could significantly improve independence for people with wheelchairs. It will also reduce overall passenger boarding time, improve on-time performance and create a better customer experience with greater service reliability across the transit network. Piloting autonomous applications on these vehicles helps drive movement toward our mobility future."

In addition to providing more independence for individuals with disabilities, the new system provides greater protection of the individual's head and neck, reduces boarding time and allows for less maintenance needed on the vehicle. TheRide's motor coach operators will be educated on the use of the system and to help answer rider questions as part of the grant.

Getting to Grips with the System
In preparation for the grant application, project staff worked with TheRide's Local Advisory Committee (LAC) of disability advocates to demonstrate the new securement system and solicit suggestions about placement during the pilot. Q'Straint brought a working demonstration model of the Quantum system to our operations facility. Both our operators and members of the LAC were able to test out the system, see how it would be installed in a bus and how both the driver and passenger would use the system.

Mike Laidlaw from Q'Straint spent an entire day answering questions for LAC members and bus operators. He explained the need for the passenger to be rea-facing, how the mechanism works to secure the rider's wheelchair and, mostly, how easy the system is to use for everyone. An important detail to come from this dialogue was to have half the units on the curb side and half the units on the street side. In addition, TheRide is keeping both existing securement locations intact, so individuals are not required use the Quantum if they don't want to do so.

Planning ahead, TheRide will include autonomous wheelchair securement systems as an option for the next round of bus purchases, based on the results of this Quantum pilot. Improving the customer experience of everyone is our goal.