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**Accelerating Mobility for All:
Highlights of Focus Group Feedback
from Persons with Disabilities
Following Autonomous Vehicle Rides**

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22nd Annual NJDOT Research Showcase**



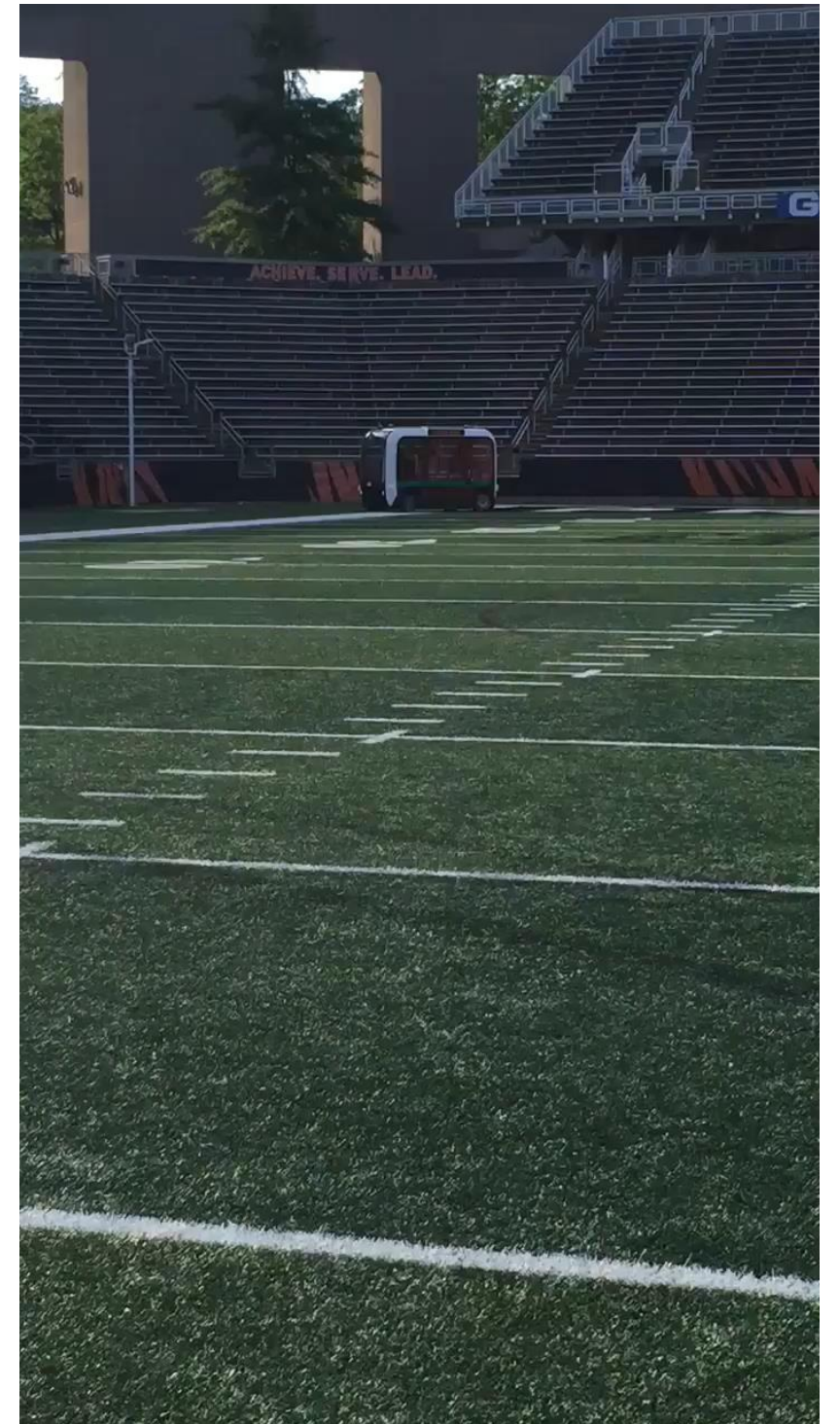
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PROJECT OBJECTIVE

To expand limited body of research on designing & deploying Autonomous Vehicles (AV) to accommodate diverse needs of persons with disability(s)

How?

Convene a series of focus groups with persons with disabilities who experienced an autonomous shuttle ride to capture their feedback



WHY AUTONOMOUS VEHICLES?

- Transportation access KEY for successful integration of persons with disability(s)
- AV innovation could offer a VIABLE transportation option
- USDOT & NHTSA supportive of AV development
- Many states moving towards AV legislation – NJ AV Task Force



METHODOLOGY: QUALITATIVE RESEARCH

- Joint research initiative - Rutgers University & Princeton University
- Focus groups (4) with a total of 21 participants
- Study inclusion criteria
- Study limitations



Characteristics	Respondents	Percent
Gender		
Male	14	67%
Female	3	14%
No Answer/Not Disclosed	4	19%
Race		
White not Hispanic	7	33%
Black not Hispanic	1	5%
White Hispanic	4	19%
Black Hispanic	0	0%
Asian	3	14%
Native American	0	0%
Hawaiian/Pacific Islander	0	0%
Other	0	0%
No Answer/Not disclosed	6	29%
Age		
18-21	3	14%
22-29	11	52%
30-39	3	14%
40-49	0	0%
50-64	2	10%
65+	0	0%
No Answer/Not Disclosed	2	10%
Education		
High School No Degree	2	10%
High School Degree	5	24%
Some College No Degree	4	19%
Associated Degree	2	10%
Bachelor's Degree	0	0%
Graduate Degree	1	5%
No Answer/Not Disclosed	7	33%
Living Arrangement		
With Parents	14	67%
With Spouse/Partner	2	10%
Group Home	1	5%
No Answer/Not Disclosed	4	19%

PARTICIPANT DEMOGRAPHICS

FINDINGS: INITIAL IMPRESSIONS

- Vehicle initial impressions
 - Physical appearance
- Entering & exiting – “easy” & “smooth”
 - Participants with visual impairments note handrail and low-step very helpful



“It looks so cool”



“It looks so futuristic”



“Amazing”

FINDINGS: ON-BOARD EXPERIENCE

- All enjoyed the trip:
 - “Smooth,” “Comfortable,” “Slow”
- On-board sounds/noises
 - Only one shared negative noise feedback
- Large windows +
- On-board video monitoring +



FINDINGS: AV INTEREST

- 17 of 21 interested in traveling again via AV.....*Why?*
 - Travel “freedom”
 - Increased “independence”
 - Decreased “isolation,” “depression,” “jealousy”
- Preference over other modes, especially if available “on-demand”



FINDINGS: AV INTEREST

- Oh, the Places You'll Go!



- On-board personal assistance?



FINDINGS: CONCERNS WITH AV

- Vehicle accessibility critical
 - Kneeling feature
 - Wheelchair lifts
 - On-board audio capabilities & multi-sensory supports
- Vehicle safety
 - On-board cameras
 - Capable audio and visual sensors
 - On-board attendant
 - Three-point seatbelt configuration
 - Maintain speed with traffic flow



FINDINGS: CONCERNS WITH AV

- Communication interface
- Comfort and design
- Availability
- Cost



CONCLUSIONS & TAKEAWAYS

Very POSITIVE feedback on vehicle initial impressions & trip experience

Most interested in using AV again

Most did not anticipate needing personal assistance on-board, but support an on-board attendant for safety reasons

AV concerns & recommendations focused on accessibility, safety, communication interface, design, cost & availability factors

Most feedback did not differ based on participant disability type

For More Information

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