

Autonomous Vehicles Briefing

Innovation & Technology Committee, August 26th, 2019

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SMARTSA FOCUS AREAS

Access to Services

Sustainability

Mobility

The background is a blurred photograph of a city street. In the foreground on the left, there is a black pedestrian crossing sign with a white silhouette of a person walking and a white arrow pointing right. The street has white crosswalk lines, and a person in a red jacket is visible in the distance. The overall image has a blue tint.

SMARTSA VISION

Building a connected, inclusive, and resilient community supporting a high quality of life.

SMARTSA PARTNERSHIP

- City of San Antonio
- CPS Energy
- San Antonio Water Systems (SAWS)
- VIA Metropolitan Transit Authority (VIA)
- San Antonio River Authority (SARA)
- San Antonio Housing Authority (SAHA)
- Bexar County Appraisal District (BCAD)
- University of Texas at San Antonio (UTSA)
- Edwards Aquifer Authority (EAA)



SMART CITIES 1.0

Vendor Driven

SMART CITIES 2.0

Government Driven

SMART CITIES 3.0

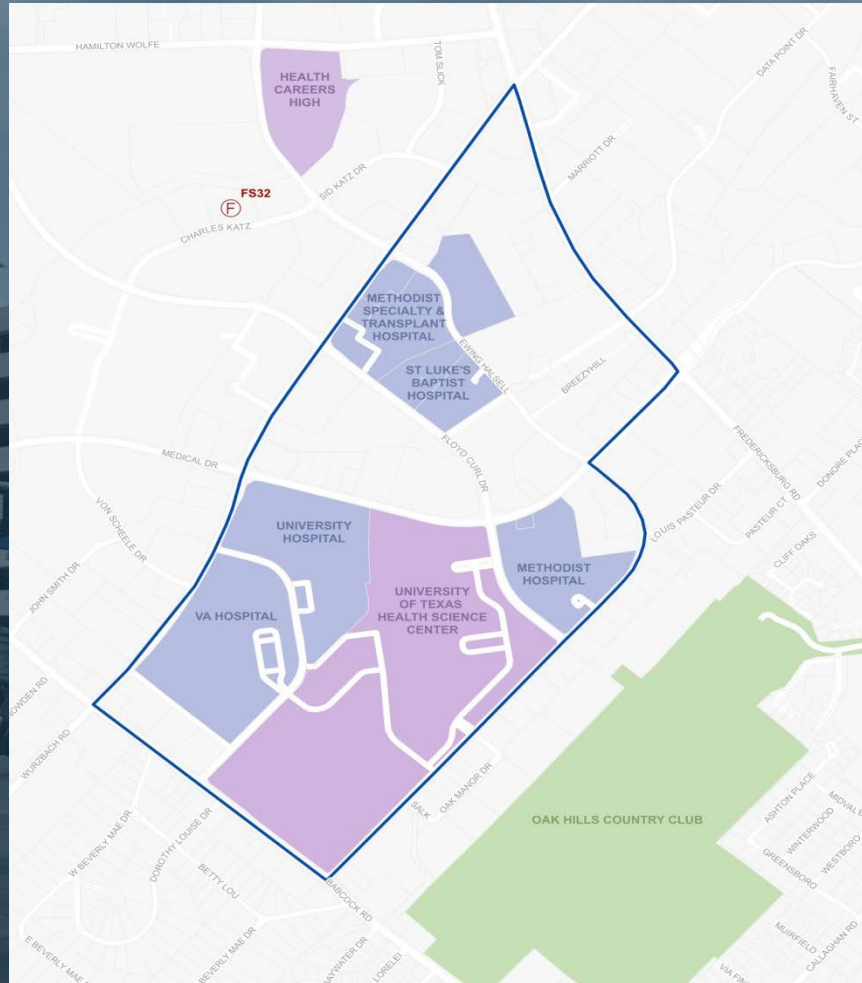
Co-Creation
Govt/Community

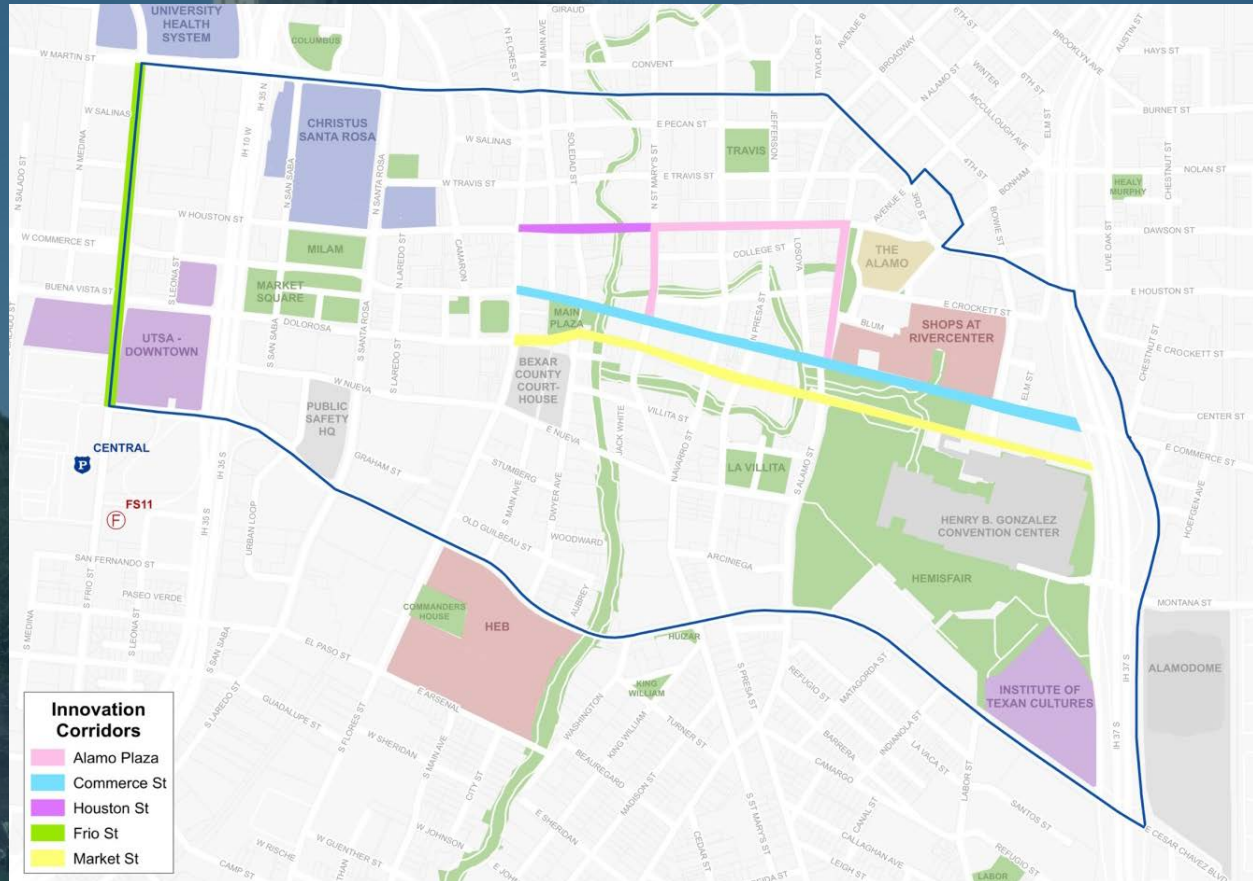
INNOVATION ZONES

Medical Center
Brooks
Downtown

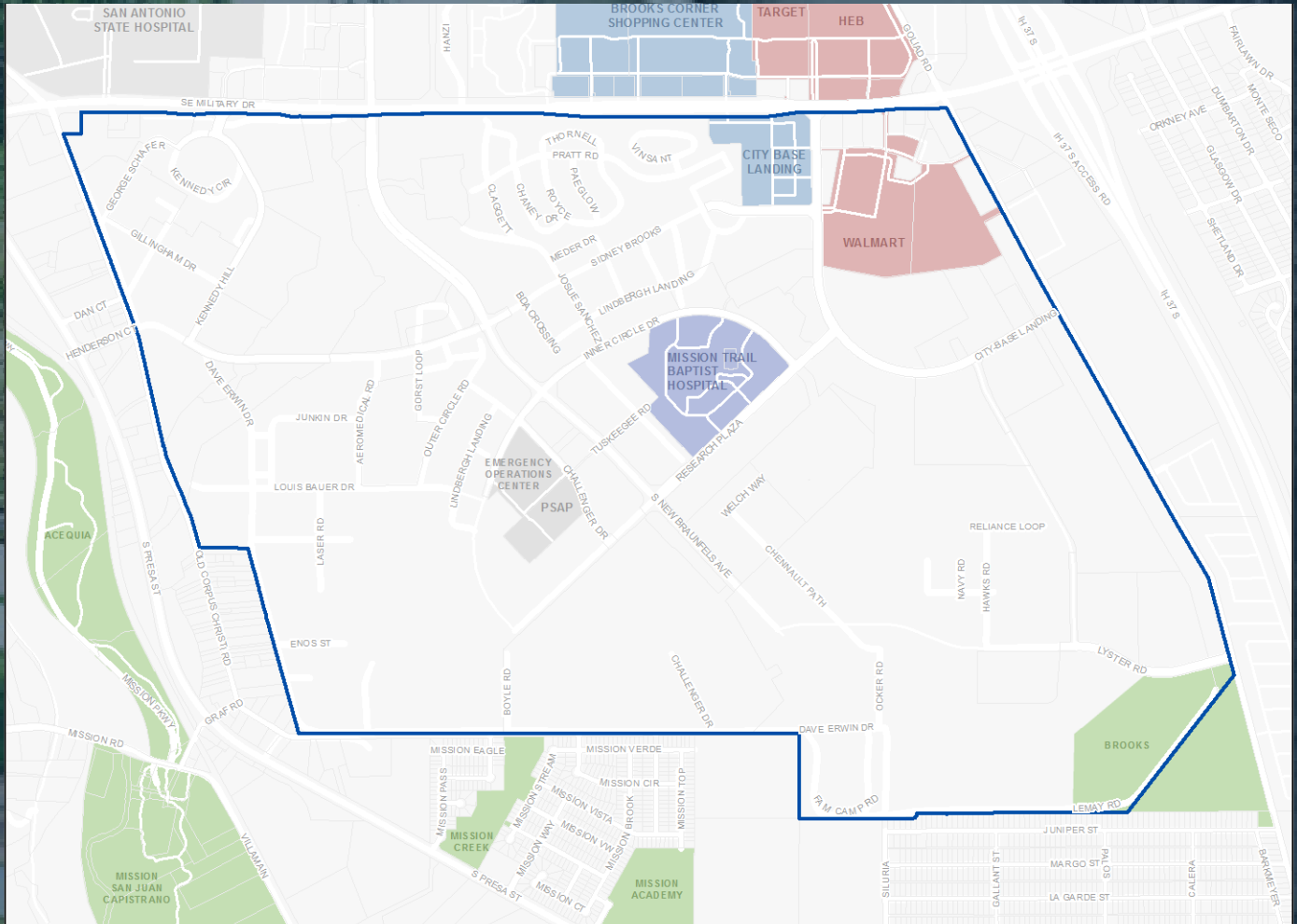


MEDICAL CENTER



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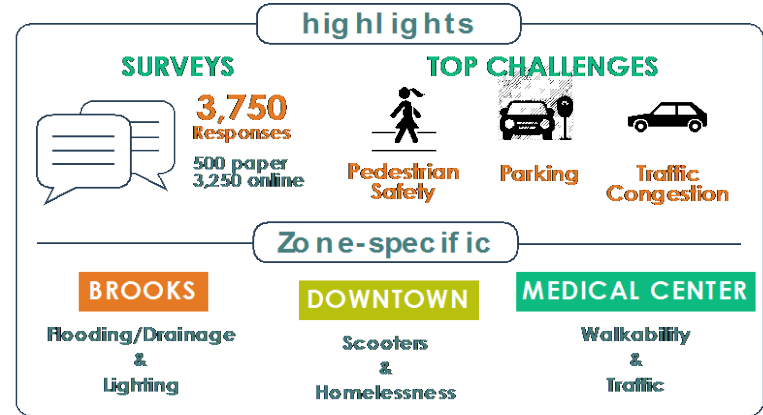
BROOKS



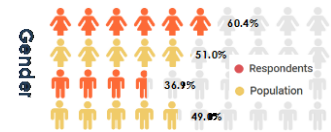
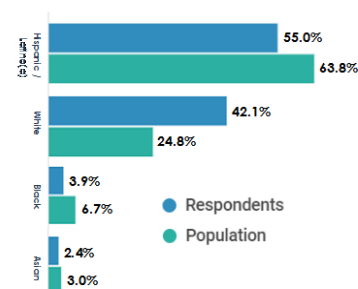
INNOVATION ZONES

- Survey Responses
 - Pedestrian Safety
 - Parking
 - Traffic Congestion

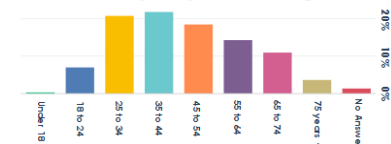
Innovation Zones: Brooks, Downtown, & Medical Center



Survey Respondents: Race & Ethnicity



Survey Respondents: Age



Historical Context

- B-Session Briefing (May 2018)
- Autonomous Vehicle RFI (July 2018)
- ITC Briefing (December 2018)
- Innovation Zones RFI (Jan 2019)
- USDOT Grant Application (March 2019)

What is an Autonomous Vehicle?

Fully automated, autonomous, or “self-driving” vehicles are defined as those in which operation of the vehicle occurs without direct driver input to control the steering, acceleration, and braking. They are designed so that the driver is not expected to constantly monitor the roadway while operating in self-driving mode.

*Note: Autonomous vehicle project at Brooks will not be fully automated or driverless initially.

Why?

Safety

- Integrating, measuring and comparing (Automated Driving System) ADS in diverse testing environments

Mobility

- Enhancing traffic operations, Vehicle to Infrastructure (V2I)/Vehicle to Vehicle (V2V) communications, and overall resiliency

Environment

- Reducing impact on environment and improving public health

Equity & Access

- Connecting all communities to jobs, medical care, and other critical services

Human Factors

- Understanding how the public interacts with, perceives, and uses the technology

Autonomous Vehicles for Who?

Senior Population

- Connecting senior populations with various destinations (live, work, play, transit, etc...)

People with Disabilities

- Opportunities for overcoming infrastructure obstacles

Low-Income Communities

- Utilizing low-cost/no-cost opportunities to ensure affordability is not an obstacle

General Public Transit Customers

- Connect last mile-first mile gaps to reduce personal vehicle use

[illegible]

VIA Brooks Transit Center



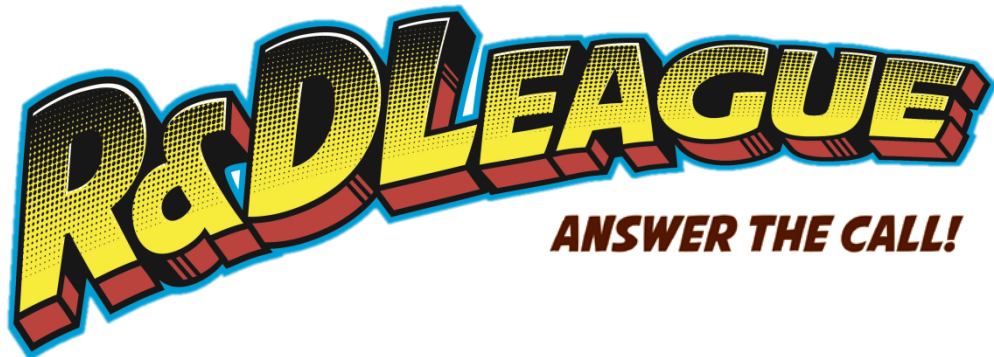
SAN ANTONIO'S UP-AND-COMING COMMUNITY WITH A VISION AS BIG AS TEXAS.



SAN ANTONIO'S UP-AND-COMING COMMUNITY WITH A VISION AS BIG AS TEXAS.



APPLIED RESEARCH COMPONENT



- Community Perceptions
- Technology Effectiveness
- Liability & Regulatory Considerations

Autonomous Vehicle Testing

Last Mile, First Mile Solution
Proactive Approach
Controlled Environment
Inclusive (Low Cost/No Cost)
Applied Research

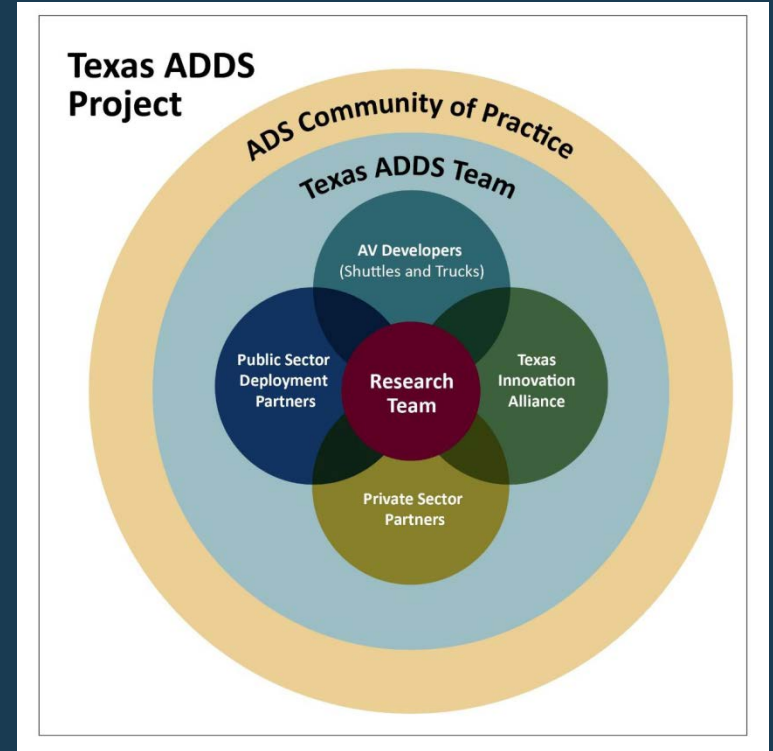
US DOT Grant Application

Local Partners

- City of San Antonio
- VIA Metropolitan Transit
- Brooks

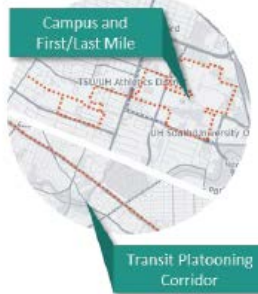
Regional Partners

- TXDOT, North Central Texas COG, Bryan-College MPO, Houston-Galveston Area Council
- Cities of Arlington, Frisco, Fort Worth, Dallas, Grand Prairie, Bryan, College Station, Houston
- Capital Metro, Houston METRO, Denton County Transportation Authority

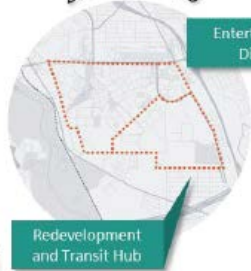


US DOT Grant Application

1a/b. HOUSTON



2. SAN ANTONIO



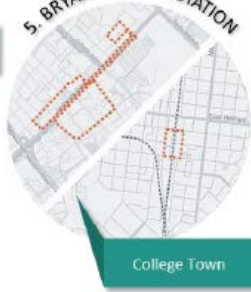
3. ARLINGTON



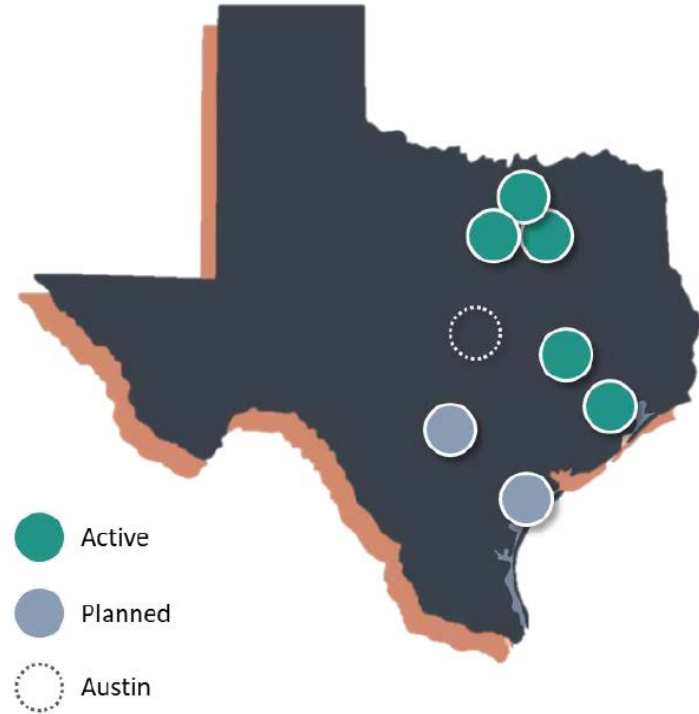
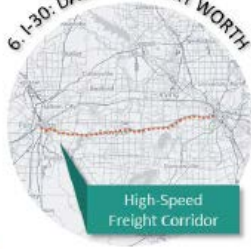
4. FRISCO



5. BRYAN-COLLEGE STATION



6. I-30: DALLAS TO FORT WORTH



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