



Center for Healthy and Efficient Mobility

A USDOT University Transportation Center

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The Texas A&M Transportation Institute (TTI), since 2016, has led a University Transportation Center (UTC) consortium that has constantly innovated and produced research, education and technology transfer for the American public in Texas and beyond. The Center for Advancing Research in Transportation Emissions, Energy, and Health (CARTEEH) provided impactful research results that transferred into practice, and effective education and workforce training programs.

This UTC was originally established with US Department of Transportation (USDOT) funding in 2016 under the Fixing America's Surface Transportation (FAST) Act. In 2022, when competing for the center to be renewed under the Infrastructure Investment and Jobs Act (IIJA) the CARTEEH consortium put forward a proposal that was aligned with the Notice of Funding Opportunity released at the time, which reflected the previous administration's policy goals.

CARTEEH's success in securing renewed funding was due to the **tangible value and measurable outcomes** it delivered. The initial grant resulted in a spin-off startup company (ElectroTempo Inc.) which raised more than \$5 million in venture capital, creating more than 10 high-quality US jobs. ElectroTempo has provided critical analytics to multiple electric utility customers and supply chain/logistics customers for load forecasting and optimization, ensuring grid reliability as the electricity sector faces rapid load growth from AI and manufacturing reshoring. Cofounder and CEO Dr. Ann Xu (who was a CARTEEH employee) has delivered keynote and panel speeches on power and energy, innovation, and American dynamism. Further, TTI leveraged the USDOT funding to raise \$6 million for establishing the Clean Transportation Research Complex, a national asset for testing energy solutions and supporting a resilient American power grid. These achievements underscore TTI's commitment to **innovation, economic growth, and national resilience**.

In 2025, with the USDOT under Secretary Sean Duffy issuing new directives focused on safety, efficiency, and economic impact, **CARTEEH proactively restructured and rebranded as the Center for Healthy and Efficient Mobility (CHEM)**. This transformation reflects a streamlined mission: to advance transportation efficiency, promote public health, and deliver economic benefits through mobility. CHEM has phased out programs that no longer align with the department's core mission and has reoriented its research to support transportation efficiency and public health.

Secretary Duffy has made it clear that the primary mission of the USDOT is safety and efficiency. CHEM's new direction—centered on healthy and efficient mobility—echoes this by:

1. Prioritizing transportation sector efficiency
2. Reducing adverse impacts on families and communities and promoting health
3. Promoting economic benefits and mobility through transportation

In our realignment, we focus on artificial intelligence (AI)-driven and data-based research, including projects covering rural areas, addressing the needs of communities and children, using AI to power infrastructure decisions and efficiency, using digital twins for advanced modeling, and co-optimizing mobility and health. Based on our track record and experience of licensing a product and spinning off a company, we are working on new commercialization opportunities on topics such as **rural accessibility, AI, Advanced Air Mobility, and road safety**. To this end, we are in the process of creating an **Innovation Fund** through which we partner with industry and startup companies to raise funds to address critical topics such as road safety and rural accessibility.



A major focus of CHEM is **road safety** since it is one of the important connections between health and transportation. We are working with more than 80 public and private partners through which we are pursuing the topic of Vision Zero (eliminating traffic fatalities). This coalition, led by TTI, is part of a Regional Innovation Ecosystem that the Texas A&M University System in partnership with the Texas Department of Transportation, is developing to provide transformational, industry-based solutions to address traffic fatalities, which continues to be a major public health issue. The focus areas of this coalition include infrastructure, data and communications, vehicles and autonomy, and their intersecting roles to promote safety and improve public health outcomes.

We are also training the next generation of transportation engineers through internships and K–12 outreach. We are leveraging our workforce development activities through which we have already reached 400 plus schools.

From Georgia to Texas to North Dakota, CHEM's university partners are delivering results that matter. CHEM is preparing for Year 3 with a renewed commitment to **transparency, accountability, and impact**—ensuring that every dollar invested serves the American people. CHEM has a focus on cost-effective solutions to address mobility and public health.

