

# Tulsa Regional **ADVANCED MOBILITY** Cluster Project

Build Back Better  
Regional Challenge

## **Appendix C** **Industry Leadership**

SUBMITTED BY



## APPENDIX: INDUSTRY LEADERSHIP

The coalition members have the distinct benefit of entering this grant application with existing relationships in place with major industry players – relationships which have been forged over decades of operational and public-private partnerships. The *development* of this application has largely relied upon existing, long-standing relationships, which has both informed our awareness of the economic opportunity presented by the TRAM Corridor, and facilitated our ability to quickly gain support and buy-in for our proposal.

In order to successfully *execute* both a Phase 1 and Phase 2 funding opportunity, we intend to deploy a series of efforts to ensure we engage industry on an ongoing basis, allowing for industry leadership and expertise to catalyze additional innovation. We propose the use of two primary mechanisms as core components of our private sector engagement strategy:

- **Advanced Mobility Council (“AMC”):** Building upon the Tulsa Regional Chamber’s experience and expertise in establishing and managing a regional Aerospace Council as well as a regional Manufacturer’s Council, we intend to stand up an Advanced Mobility Council, which would be comprised of senior representatives of major corporate partners with a presence in the region. As with the Chamber’s existing Councils, the AMC would meet on a quarterly basis, providing a key opportunity for peer-to-peer learning and sharing of best practices, while also lending an opportunity for industry to inform and guide the strategy of regional economic developers.
- **Industry-Led Oversight and Governance:** As we establish key governance bodies, such as those which will oversee the start-up and long-term operation of the Flight Corridor, the LaunchPad, or our workforce initiatives, the coalition members commit to identifying opportunities to incorporate industry representatives into these bodies. Inclusion of industry representatives at a decision-making level will be critical to the long-term success of these initiatives, by ensuring responsiveness of the assets and programs to the evolving needs for innovation.

The following text provides an overview of key partners that will play a role in implementing both Phase 1 and Phase 2 efforts for the region’s application. In addition to corporate and industry partners, we have included additional major partners who will play a fundamental role in executing our project and program proposals. All of the entities have shared letters of support to this end, which are respectively hyperlinked below.

## RESEARCH AND INNOVATION PARTNERS

[36 Degrees North](#) is the Tulsa region’s primary entrepreneurial support organization, having generated \$375 million+ in economic impact in the region since 2017, and having recently received \$370,000+ in Venture Challenge grant funds via the EDA’s Build to Scale program. The organization is excited to support the coalition in shaping the Launchpad Research and Technology Center.

[Oklahoma State University \(Main Campus / System-wide\)](#) is the state’s leader in aerospace education and research. The University will play an integral part in this coalition by providing the Helmerich Research Center (Ref. [Regional Assets Appendix](#)) as the site for the LaunchPad Center

and the Certification and Training programs, as well as investing in research and education efforts focused on the Advanced Mobility industry through the Oklahoma Aerospace Initiative for Research and Education (OAIRE).

**The Oklahoma State University Unmanned Systems Research Institute (OSU USRI)** has demonstrated its position as a world leader in autonomous systems and Advanced Aerial Mobility technology, having received over \$20 million in external funding. OSU USRI has worked closely with Osage Nation and TIL to develop the vision for the Flight Corridor project, and is actively working on an MOU to formalize the partnership and prepare for implementation.

**The Tom Love Innovation Hub at the University of Oklahoma (I-Hub)** has driven an economic impact of \$300M+ since opening in 2016 via programs focused on supporting the launch and growth of new companies. The hub's OK Catalyst Programs recently received one of eight SBA SBIR Catalyst Prizes to build a "Hub of the Heartland" to scale across the region. The hub is a long-time partner of TIL, OSU, TAE0, and the Tulsa Regional Chamber, and is excited to offer services at the proposed Launchpad Center, to prepare emerging entities for SBIR / STTR opportunities.

**The Unmanned Aerial Systems Cluster Initiative (UASCI)** is dedicated to its mission of accelerating growth of the Unmanned Aerial Systems (UAS) industry by enabling collaborative efforts across established companies and emerging entrepreneurs in Oklahoma. The organization is eager to partner with the coalition to drive alignment across research, development, and commercialization of new technologies via the Launchpad, Flight Corridor, and Industrial Parks projects.

**The Oklahoma Center for the Advancement of Science and Technology (OCAST)** is excited to support the proposal, given close alignment with OCAST's purpose – since its inception, OCAST has invested close to \$350 million of state funds in technology-based economic development. The Center is excited to offer internship support for researchers in the Launchpad Research and Technology Center, bolster entrepreneurs through SBIR / STTR assistance, and support manufacturers in the Advanced Mobility industry through the National Institute of Standards and Technology's Manufacturing Extension Partnership.

**The University of Tulsa (TU)** is a private university located near downtown Tulsa, with a strong STEM program dominated by its Colleges of Engineering and Natural Sciences. The university is seeking to create enhanced research opportunities for its faculty and students by participating in the Launchpad Research and Technology Center. Upon the award of a Phase I grant, TU is committed to pursuing an agreement with peers at OSU around IP governance, and potential sharing of space and equipment. Having successfully collaborated with TIL, the Tulsa Regional Chamber, and TAE0 in the past, TU is also seeking to identify linkages to the AM-Oriented Certification and Training programs, as well as the Industrial Parks.

**Vigilant Aerospace Systems** is a technology company founded and headquartered in Oklahoma, focused on airspace management and safety software for remotely piloted aircraft. The company has previously partnered with OSU USRI. The CEO serves on the steering committee of the UAS Cluster Initiative, and as a member of the FAA's BVLOS Aviation Rulemaking Committee. Vigilant Aerospace is particularly excited about the Flight Corridor project, believing in its potential to drive an ecosystem of talent, research, and commercialization pathways to help early-stage companies like theirs.

**Veroplane** is an Oklahoma-based aerospace technology company that intends to establish its engineering and manufacturing in the Tulsa area. The company recently partnered with OSU USRI on unmanned aircraft research, and looks forward to collaborating with the coalition via the Launchpad Research and Technology Center and Flight Corridor programs.

**L3Harris Aeromet** is an aerospace systems manufacturer located in Tulsa, recently awarded a major defense contract providing support for the Missile Defense Agency Airborne Sensors program. The company is eager to partner with the proposed Launchpad Research and Technology Center to align research initiatives with industry needs and drive commercialization of new technologies.

**MaxQ** is an innovation leader based in Stillwater, Oklahoma, focused on design and manufacturing of cool chain packaging. The company recently partnered with OSU's USRI to use unmanned delivery systems for increased efficiency and safety, and has expressed support for the Launchpad Research and Technology Center as well as the Flight Corridor.

**Williams** is a Fortune 500 energy company focused on natural gas gathering, processing and transportation. The company is excited about the combination of cutting edge research, testing facilities, and linkages to local companies presented by the Launchpad Research and Technology Center and Flight Corridor projects. Williams looks forward to collaborating with the coalition and providing expertise on promising industry use cases.

## **CERTIFICATION AND TRAINING PARTNERS**

**InTulsa** is a talent matchmaking driver that connects innovative companies with diverse local talent. In this capacity, the organization closely monitors trends across the labor market and high-tech industries. InTulsa is excited to leverage its expertise and insights to produce an annual Labor Market Observatory report in support of the AM-Oriented Certification and Training programs. The data will form the basis of biannual convenings in collaboration with the Tulsa Higher Ed Consortium, and will drive discussions around periodic updates to program criteria and right-sizing of the certification programs.

**Tulsa Community College (TCC)** is Oklahoma's largest two-year college, playing a crucial role in preparing the regional workforce for a secure future. The college is excited to work with the proposed Labor Market Observatory as well as explore the potential to incorporate engineering-oriented pathways into the existing College Park program, established in partnership with OSU-Tulsa as a means to combine support and scholarship programs of TCC with the benefits of studying and networking at a four-year research university.

**Oklahoma State University-Tulsa (OSU-Tulsa)** has a history of offering workforce-responsive programs, with many of its students being working adults. OSU-Tulsa looks forward to working with the proposed Labor Market Observatory to ensure alignment of the Certification and Training Programs with future careers in Advanced Mobility. Having collaborated with Tulsa Community College (TCC) to offer College Park (a public, four-year university experience on the OSU-Tulsa campus), OSU-Tulsa is excited to explore incorporation of engineering tracks into the College Park program, as well as extra-curricular opportunities for students at the Launchpad Research and Technology Center.

**The Tulsa Higher Education (THE) Consortium** is a multi-institutional collaborative effort, bringing together seven Tulsa-area institutions to improve students' journeys towards degree completion, professional independence, and mobility. THE Consortium is eager to partner with the

coalition in convening and working across institutions to assess and act upon the findings of the Labor Market Observatory.

**The Oklahoma Manufacturing Alliance (OMA)** is a network of trusted experts working with manufacturers to help them evolve to meet the needs of the economy. OMA has a track record of delivering results and a proven Return on Investment, having created more than 4,000 new high-wage jobs over the past five years. OMA is committed to leveraging its unique position to provide the coalition with access to appropriate expertise, information, and tools during the development and implementation of the AM-Oriented Certification and Training Programs. The alliance pledges to collaborate with the Labor Market Observatory team as well as its wide network of partners to design an apprenticeship program focused on Advanced Mobility manufacturing.

**The University of Oklahoma-Tulsa (OU-Tulsa)** recognizes the criticality of the proposed projects, and the alignment of the projects with its mission to provide industrially relevant research and education opportunities to a diverse student body. The university is excited to work with the proposed Labor Market Observatory as well as support the effort through the allocation of endowed chairs in fields relevant to the Advanced Mobility cluster.

**The Tulsa Regional STEM Alliance (TSRA)** is a non-profit organization that offers broad, deep and innovative pathways to high-impact careers. The Alliance looks forward to working with the coalition to ensure a seamless transition from a K-12 STEM background to a career in Advanced Mobility, as part of the AM-Oriented Certification and Training Programs.

**Tulsa Tech** is an established educational institution in the region, cognizant of the importance of aligning the workforce to the skills of the future. The institution is excited at the potential of the AM-Oriented Certification and Training Programs to fill the talent and workforce gap across the region, and welcomes the opportunity to support the coalition.

**Oklahoma State University Institute of Technology-Okmulgee (OSUIT)** is an established education leader in the region. The institute is excited about the proposed AM-Oriented Certification and Training Programs, recognizing the criticality of aligning the regional talent and workforce with the needs of the industry.

**Holberton Tulsa** is a prominent regional institution for training software engineers. The school is proud of its contribution to community education, and is supportive of the opportunity presented by the AM-Oriented Certification and Training Programs, believing in its potential stronger, more vital economy in Northeast Oklahoma.

**Tulsa Public Schools** expresses enthusiasm for the AM-Oriented Certification and Training Programs, in recognition of the need to prepare the regional talent force for long term vitality. The organization is committed to ensuring that education opportunities are not only effective, but also accessible, and has seen first-hand how the members of this coalition work collaboratively to drive economic prosperity.

## **INVESTMENT FIRMS**

**Radius Capital** is an investment fund focused on the enabling technologies driving advanced air mobility, and has overseen the deployment of tens of millions of dollars into the field – the company is excited to contribute expertise to the LaunchPad project, potentially invest in

participating startups, and create opportunities for portfolio companies and others in their network to utilize the Flight Corridor.

**Atento Capital** is a Tulsa-based investment firm focused on reliable returns and quality job creation, committed to supporting growth and development of high-tech industries in Tulsa. With a history of collaborating with TIL, Tulsa Regional Chamber of Commerce, and TAEO, the firm looks forward to potentially investing in and supporting startups participating in the Launchpad Center and Launchpad Fellows programs.

**Cortado Ventures** is an Oklahoma-based firm that invests in early-stage businesses that leverage technology to scale. Having a strong history of working with members of this coalition, Cortado Ventures can attest to the commitment towards innovative methods of economic development. The firm looks forward to potentially investing in and supporting startups participating in the Launchpad Center and Launchpad Fellows programs.

## **EQUITY PARTNERS**

**Madison Strategies Group's Tulsa Community WorkAdvance (TCWA)** is a sector-based career advancement model designed to help low-income underserved adults prepare for, enter, and grow in quality jobs with opportunities for career advancement. A randomized control trial administered by MDRC showed that WorkAdvance participants earn up to \$4,125 more per year. WorkAdvance has recently been partnering with the City of Tulsa, TAEO, and Tulsa County to expand regional workforce support to women, disenfranchised youth, and COVID-19 displaced workers. Madison Strategies Group is committed to ensuring that the economic opportunities presented by the Advanced Mobility cluster are accessible to all Tulsans, particularly historically disadvantaged workers.

**Charles and Lynn Schusterman Family Philanthropies** is a philanthropic entity focused on investing in the potential of young people and ensuring that all students, regardless of race or zip code, have access to a quality education. The foundation has invested in the Tulsa Regional STEM Alliance (approaching 50,000 young people), and in Tulsa-area school districts to expand STEM content and elective courses for over 18,000 students in Pre-K – 12<sup>th</sup> grade. It has also partnered with TCC to support students in transferring to regional universities, and has funded Tulsa Community WorkAdvance to design and launch workforce training programs for young adults. The foundation is whole-heartedly supportive of the TRAM cluster proposal and is eager to deepen and continue its collaboration with the coalition.

**Black Tech Street** was founded to build a community of black visionaries and entrepreneurs in Tulsa dedicated to cultivating black talent through tech – a Black Wall Street for the twenty-first century. Black Tech Street is excited to work with the coalition to develop an actionable plan to ensure that the Advanced Mobility cluster impacts all Tulsans, with a focus on defining and applying measurable metrics to track progress for the Launchpad and Certification and Training programs. Focus areas include expanding the pipeline of diverse individuals entering skilled professions; strengthening the hiring, retention, and promotion of racially and gender-marginalized individuals; and institutionalizing best practices targeted towards achieving shared Diversity, Equity and Inclusion (DEI) goals.

**Lightship Foundation** works with underrepresented entrepreneurs in the Midwest, with a focus on ensuring that benefits of economic development programs are realized by communities of color.

Lightship has partnered with Build in Tulsa to build an entrepreneurship ecosystem, providing capital investment as well as meaningful support and programming for innovators (e.g., boot camps, pitch competitions, accelerators). In support of the Advanced Mobility cluster, the foundation looks forward to pursuing a partnership with Langston University, as well as contributing their expertise to ensure an equity focus across projects.

**Build in Tulsa** is a local and national multi-sector effort committed to providing Black entrepreneurs with first-class support, networks, and funding for breakout success. Build in Tulsa looks forward to building on existing relationships with Atento Capital, Lightship Foundation, inTulsa, and TIL, to serve as a supportive landing pad for black entrepreneurs coming out of the Launchpad Center, and as a potential capital partner for promising black founders. The organization is excited to contribute their expertise as detailed program plans are developed upon award of a Phase I grant, ensuring an equity focus across all projects.

**TEDC Creative Capital** is a major partner to the City of Tulsa, Tulsa County, and TAE0 in developing and executing support for small businesses and entrepreneurs, with a focus on women, minority-owned and disadvantaged businesses. TEDC has played and will continue to play a critical role in providing access to capital in support of growing small businesses, and will support the region's efforts to ensure all Tulsans have access to the economic opportunity created by the growth of an Advanced Mobility Cluster.

**Housing Solutions** is dedicated to ensuring that homelessness is rare, brief, and non-recurring. As a key partner with TAE0, Housing Solutions is looking forward to complementing the efforts proposed in this application, developing strategies to mitigate the inflationary pressures of strong economic growth.

**The Housing Authority of the City of Tulsa (THA)** is committed to developing holistic communities that provide the foundation for economic success of Tulsa residents. THA is a valued partner to the City of Tulsa and TAE0, and is looking forward to complementing the efforts proposed in this application, working to ensure that all Tulsans have access to opportunities generated by strong economic growth.

## **INDUSTRY PARTNERS**

**Canoo** is an Electric Vehicle startup with plans to build a new factory spanning 400 acres at the Mid America Industrial Park in the Tulsa region. Canoo welcomes the opportunity to be a partner in the emerging Advanced Mobility industry, and enthusiastically supports the coalition's proposed projects, affirming the necessity for an ecosystem of research and testing facilities, entrepreneurial support, industry infrastructure, and certification and training programs.

**TAT Technologies Ltd.** Is a strategic global partner to leading players in the aerospace industry, excited to have their thermal management solutions (with a primary focus on the aerospace industry) relocating from Israel to Tulsa. The company is excited to support the TRAM proposal, believing in the potential of the project to impact a broad range of businesses and residents, and having seen first-hand how the coalition can work collaboratively and effectively.

**Navistar, IC Bus**, is a market leader that operates and manufactures over 11,000 school buses a year at the Tulsa International Airport. The company expresses enthusiastic support for the TRAM cluster proposal, recognizing the need for relevant technical expertise as well as research and testing facilities. Having benefited from the city's support in its journey towards electric school

buses, Navistar welcomes the opportunity to be a regional partner in driving the growth of the Advanced Mobility cluster.

**Francis Energy** is an industry leader focused on building out networks of public access EV charging equipment in order to encourage the widespread adoption of EVs. The company affirms its belief that the Launchpad and Flight Corridor projects will provide much-needed research and testing facilities, while the Certification and Training programs will address an anticipated talent and workforce gap.

**Spirit AeroSystems** is one of the world's largest manufacturers of aerostructures, and expresses support for the combination of research and testing facilities, commercialization opportunities, and certification and training programs proposed herein. The company is excited to support the application and recognizes the significant potential of the TRAM cluster to position the Northeast Oklahoma region for long-term vitality.

**Nordam** is a global aerospace manufacturing and repair firm headquartered in Tulsa. The company applauds the combination of research and testing, commercialization, and upskilling efforts proposed herein, welcoming the opportunity to support the application and re-affirming the projects' potential to position the region as a hub of innovation for the Advanced Mobility industry.

## **REGIONAL PARTICIPANTS AND SUPPORTERS**

**The Robson Family** is honored to support the TRAM cluster proposal with a key regional asset: a 2,000 acre greenfield property to serve as an Advanced Mobility-focused industrial park. The Robson Family Trust has worked with regional bodies for more than 20 years to plan and construct supporting infrastructure for the megasite, having invested \$100 million+ to ensure access to roads, water, and electricity. There is also a plan for sustainability, with the City of Tulsa placing a Tax Increment Finance (TIF) district over the 2,000 acres of the planned build-out.

**The City of Inola, Oklahoma** is excited to partner with Tulsa Ports to facilitate the construction of new and improved wastewater facilities to be located inside the city limits. The city recognizes the potential of the Advanced Mobility cluster, and fully supports the efforts of the coalition as they embark on implementation planning.

**Senator James M. Inhofe** expresses his strong support for the coalition's proposal, recognizing the opportunity to build on Tulsa's historic success and pursue growth in the evolving Advanced Mobility space. He commends the efforts of the coalition members to collaboratively develop projects that are targeted towards harnessing the region's strongest assets, enable a resilient regional economy for the future.

**The Muscogee Nation** is supportive of the TRAM cluster proposal, recognizing the need to ensure that the region grows with the changing times. The nation asserts that the projects proposed herein will bolster shared goals of driving innovative, diverse talent with a focus on advanced technology, and ensuring that the community's young entrepreneurs have access to the resources they need to succeed.

**Oklahoma Department of Commerce (ODOC)** recognizes the potential of the TRAM cluster criticality of tying together the state's long-standing expertise across the aerospace and manufacturing sectors with new and innovative research, development, and commercialization.