

Advanced Cyber Tech & Innovation Collaborative (TACTIC) Strategy Development Grant Application

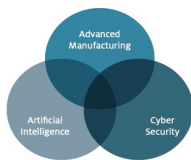
Introduction: Advances in Artificial Intelligence (AI), Machine Learning (ML) and Data Analytics occur daily, changing how we train, educate, work, live and play. The use of sensors, Internet of Things (IoT) devices, data analytics, AI, and ML necessitate the integration of essential industries such as transportation, energy, communication, healthcare, finance, education, public safety, and governance, creates interconnected, smart manufacturing and smart communities. Technology, then, must be considered infrastructure and must include cyber-ready security. The most significant challenge facing a rapid and broad adoption is the threat of cyber breaches and compromised cyber security. With critical infrastructure systems and industries of national significance, the Greater Southwest Houston Region (GSHR) is a prime area for the creation of a Technology Hub and a large, well-trained, tech savvy workforce.

We propose the creation of The Texas Advanced Cyber Tech & Innovation Collaborative (TACTIC) whose goal is to create a regional model of a coordinated Technology Hub, advancing and protecting the capacities of our region that can serve as a national and global model. The objectives of TACTIC are to develop technological enhancements, create new technology, provide AI, data analytics and cybersecurity training and education and workforce upskill to ensure a high-skilled workforce. TACTIC will provide incentives and opportunities for high tech entrepreneurs and attract national and global industry partners to our region to create and grow equitable, globally beneficial, profitable jobs that will remain in the United States (US) and protect our nation.

Region: TACTIC includes portions of the Houston-The Woodlands, Sugar Land, TX Metro Area (Brazoria, Fort Bend, Waller, portions of west Harris counties) and Wharton County, which is *divided into both the El Campo micropolitan statistical area*, and the Houston-The Woodlands, Sugar Land combined statistical area. By focusing on the GSHR, TACTIC gains geographical diversity (urban, suburban, and rural communities), access to key industries, protection of critical infrastructure (transportation systems, communication networks, water, and school systems), and active inclusive community engagement. See Infographic Page 2.

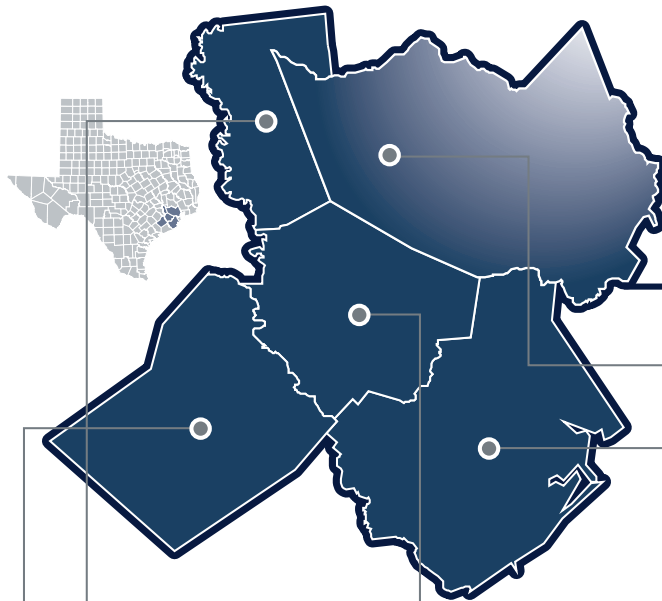
Technologies Considered: Based on the industries identified; transportation, energy, communication, healthcare, finance, education, public safety, and governance, combined with our supply chain opportunities and the unique geographical diversity of our region, creates interconnected, smart manufacturing and smart cities. TACTIC spotlights the intersection of Advanced Manufacturing, AI, and Cybersecurity. See Infographic Page 2.

Entities: Representatives from all five required entity type are represented in our consortium. See Infographic below.



TEXAS ADVANCED CYBER TECH & INNOVATION COLLABORATIVE

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ENTITIES WITHIN THE REGION

Institutions of Higher Education:
University of Houston (UH)*, University of Houston Victoria (UHV) at Katy*, Houston Community College (HCC) Northwest and Southwest*, Wharton County Community College (WCJC)*

**Hispanic-serving and Asian-American and Native American Pacific Islander-serving institutions, and Texas State Technical College*

Local Government:

Fort Bend, Brazoria, Waller, Wharton and west Harris Counties

Industry Groups:

AT&T, TanCHES Global Mgmt. Inc., Union Pacific, Kansas City Southern, Port Freeport

Economic Development

Organizations:

Fort Bend Economic Development Council, Katy Economic Development Council, West Houston Association, Houston-Galveston Area Council

Workforce Training Organizations:

Workforce Solutions

ASSETS OF HIGHER EDUCATION INSTITUTIONS

Houston Community College Northwest & Southwest campuses, both offer Cyber Security Analysis micro-credential training and education programs, with the SW campus housing the Advanced Manufacturing Center for Excellency

Texas State Technical College, with its Military Friendly School designation, offers programs for cybersecurity and digital forensics

UH at Sugar Land's Division of Technology within the Cullen College of Engineering has over 4,000 diverse students. By 2025, UH at Sugar Land will have two technology buildings to house all technology programs

UH Victoria at Katy's Computer Information System's degrees is an interdisciplinary program focusing on business and computers

Wharton County Junior College has four locations in Wharton, Matagorda and Fort Bend counties offering programs in Information Security Analysis Specialty

WALLER COUNTY

Key Assets:

- Strategic location along major transportation routes facilitating the movement of goods and people
- Adjacent to the west side of Harris County and has attracted numerous international businesses to relocate their distribution centers and national headquarters in the area including:
 - Grundfos, the world's largest water pump manufacturer,
 - Daikin/Goodman, a global Fortune 1000 company which manufactures residential and commercial HVACs

WHARTON COUNTY

Key Assets:

- "Texas Golden Triangle" between Austin/San Antonio, Dallas/Fort Worth, and Houston/Beaumont
- The fastest growing region in the US
- Strategically located on the I-69 corridor, the primary US-Mexico-Canada trade route
- Well known for its thriving farming and ranching sectors

FORT BEND COUNTY

Key Assets:

- One of the most rapidly growing counties in the US
- 50% of the county is still relatively undeveloped
- Benefits from land adjacent to rail lines, major highways, three Class I Rail lines, two US Interstates, and the Sugar Land Regional Airport facilitating efficient transportation
- Boasts a diverse and skilled workforce, with a wide range of industry opportunities

BRAZORIA COUNTY

Key Assets:

- Economy is driven by medical, biotechnology, manufacturing industries, major petrochemical plants, agriculture industry, and the Port Freeport—the fastest growing port in Texas

WEST HARRIS COUNTY

Key Assets:

- Offers a robust infrastructure, including access to major highways, rail lines, and George Bush Intercontinental Airport
- Home to the Houston Energy Corridor and Westchase District

Regional Innovation Officer (RIO): TACTIC will conduct a national search for its RIO. The ideal candidate will have the needed education, work experience, innovation mindset, proven track record of managing successful projects leading to inclusive, positive regional economic impact. Responsibilities include at a minimum:

- Creating a comprehensive communication strategy to ensure effective interchange of ideas and solutions amongst consortium members and partners.
- Directing the structure, management, scheduling and planning of consortium workshops.
- Project management.

Environmental and Climate Responsibilities: Energy efficiency is fundamental to the coalition's operations and can be achieved through the adoption of energy-efficient hardware and optimization of data center cooling systems. TACTIC will require responsible management of electronic waste and will promote responsible sourcing and procurement practices to ensure vendors and partners adhere to ethical and sustainable business principles. TACTIC will account for current and future weather and climate-related risks, such as hurricanes and coastal flooding by implementing a resilient infrastructure and engaging the community on strategies to mitigate the impacts of these risks.

Equity: TACTIC is committed to expanding the number of high-skill, high-paying jobs and ensuring that the economic benefits of the project are shared by all in the region. Utilizing census and free/reduced school lunch eligibility data, TACTIC will identify individuals from underserved and underrepresented communities, veterans, and non-resident-born individuals, to create specific recruitment initiatives and incentives. Through a multifaceted approach, TACTIC will prioritize the following key strategies to ensure Advanced Manufacturing, AI, and Cybersecurity training and education flows from school districts through the STEM workforce pipeline to institutions of higher education:

- collaborations with regional school districts
- skill development, mentorship, scholarship support and training programs
- job creation efforts and job placement programs
- attraction of high-tech companies to the region

Strategy Development

Through a series of coordinated planning and data analysis workshops, we will develop a comprehensive regional technology strategy. Our initial focus will be on conducting a thorough assessment, gathering crucial data and insights related to existing infrastructure, technological capabilities, workforce skills, industry demands, and other relevant factors specific to the region. This assessment will serve as the basis for shaping targeted and impactful goals, essential for the successful implementation of the TACTIC plan. Clear and specific objectives will be outlined, along with well-defined milestones to be achieved within the stipulated timeline. Our strategies will then be crafted, outlining specific actions, initiatives, and projects necessary to realize these goals. Furthermore, we will identify the necessary planning, zoning, and policy changes required to establish an sustainable environment for the seamless execution of this comprehensive technology strategy.

A corresponding emphasis will focus on the coordination of locally defined planning processes across jurisdictions and agencies. This coordination will promote collaboration among

stakeholders, including government entities, industry leaders, academic institutions, and community organizations. Working together, stakeholders share expertise, resources and perspectives to shape the regional technology strategy.

The 18-month timeline is a comprehensive approach to develop and implement a regional technology strategy, with a focus on economic growth, job creation, and workforce development. It highlights the importance of coordination, assessment, planning, and strategic partnerships for the success of the proposed initiatives.

Proposed 18-Month Timeline:

Month 1-3:

- Coordinate locally defined planning processes across jurisdictions and agencies to develop a comprehensive regional technology strategy.
- Conduct assessment to determine the region's specific needs and capacities.

Month 4-6:

- Develop goals and strategies based on the assessment findings to implement regional plan.
- Identify planning, zoning and policy changes required to support the technology strategy.

Month 7-9:

- Search/Hiring of Regional Innovation Officer (RIO) to lead implementation of technology strategy.
- Launch plans for promoting Data Analytics, AI and Cybersecurity opportunities in the region.

Month 10-12:

- Finalize the hiring of the RIO and onboard them into the role.
- Pursue development of plans for economic growth, job creation, and workforce development, aligning with the technology strategy.

Month 13-15:

- Design and implement workforce development strategies.
- Begin environmental and engineering documentation process.

Month 16-18:

- Review and finalize all documentation for the strategy implementation.
- Conduct regular progress assessments, making necessary adjustments to ensure successful execution of the comprehensive regional technology strategy.

The timeline allows for a systematic and well-coordinated approach to drive the region's technological advancement and economic growth.