Texas A&M Engineering
Experiment Station

STRATEGIC PLAN
2020-25

ENGINEERING **INNOVATION** AT WORK

ABOUT **TEES**

For more than 100 years, the Texas A&M Engineering Experiment Station (TEES) has improved lives through basic and applied engineering research and development for the state of Texas and the nation.

As one of eight state agencies within The Texas A&M University System, TEES was established in 1914 as part of the Texas land-grant university system (under state statute, chapter 88, subchapter E, Texas Education Code). TEES performs cutting-edge research, advances workforce through education and technology transfer, and offers solutions to improve quality of life and fosters economic development.

TEES ADVANTAGE

TEES' structure maximizes research and educational partnerships across the state and nation by forming networks that bring together subject matter expertise from universities, national laboratories, state and federal agencies, and industry.

TEES serves as a catalyst for collaborations that position Texas to be especially competitive for federal projects and plays a major role in strengthening research leadership across the state.

Headquartered in College Station, TEES has a close relationship with Texas A&M University, as well as regional divisions at 19 other institutions of higher education in Texas and affiliations with community colleges.

TEES has a track record of success upon which to build. The agency currently administers more than 1,200 research projects and over 750 industry partnerships to the tune of over $200 million. The majority of the more than $200 million in external research dollars generated by the agency continues to come from federal sponsors, while research funding from the private sector has remained strong through research centers and consortia that serve a broad range of industries.

TEES is known for its entrepreneurial culture, relevance of its research activities and its close collaboration with the state. TEES has leveraged the state investment more than tenfold to scale up the research enterprise in Texas. In the long term, the research pays a much greater return in benefits to the industry and economy of Texas and the nation.

Defining the Future Through Innovation

This is the strategic plan created by TEES leadership for 2020-2025. While we remain committed to the objectives outlined in this plan, we are actively developing a new strategic plan for 2026-2030, which will be available later this year.

This is an exciting time for TEES.

The strategic investments made over the past several years have positioned TEES for unprecedented growth.

Over the past decade, a large and successful research portfolio has been built within TEES thanks to established and promising research engineers, the majority of whom are jointly appointed as engineering faculty at Texas A&M University.

The majority of work has been in basic research, positioning TEES among the top of peers nationally. It is essential to continue supporting this important foundation of the agency's success. However, future growth in applied research is critically important to achieving TEE's mission of developing and transferring high-quality and technology-oriented products to the marketplace.

This five-year strategic plan outlines the steps to continue providing competitive, best-in-class support for the agency's basic research activities while diversifying the portfolio by expanding strengths in applied research.

Robert H. Bishop

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BASIC AND APPLIED RESEARCH

NSF, NIH, DOD, DOE, DHS, DOI, DOT, NASA, Foundations, Industry

Basic Research	SOLICITATIONS	Applied Research
Grants		Contracts
Grand Challenges		Customer – Mission Driven
Lower TRL		Higher TRL
Faculty and Students		Permanent Research Staff

STRATEGIC VISION

Build upon strategic investments and strengths to develop an innovation ecosystem that nurtures TEES' longstanding strengths in basic engineering research, while expanding its investment into new opportunities in applied research.

Strategic Objectives

1. We will ensure that appropriate organizational structures are in place to support TEES' broad spectrum of basic to applied research.
2. We will leverage state-of-the-art facilities and equipment to support TEES' broad spectrum of basic to applied research.
3. We will expand staff with new approaches to hiring to support TEES' broad spectrum of basic to applied research.
4. We will refresh our brand to more accurately reflect TEES' broad spectrum of basic to applied research.
5. We will expand our menu of contract vehicles to support TEES' broad spectrum of basic to applied research.
6. We will cultivate long-term partnerships with key stakeholders to support TEES' broad spectrum of basic to applied research.

1 We will ensure that appropriate organizational structures are in place to support TEES' broad spectrum of basic to applied research.

ACTIONS:

- Establish a reporting structure that provides the necessary autonomy, authority and responsibility to deliver results for mission-focused customers
- Situate direct reports and dedicated staff to provide insight into and oversight of specific targeted areas so that decisions can be made efficiently and align with committed goals and objectives
- Review and revise employee and team incentives to drive capture and execution of applied mission-focused programs
- Maintain and establish new centers, institutes and core research facilities in areas of cutting-edge engineering research and professional development

KEY METRICS:

- Comprehensive review of organizational structure and processes supporting business development and program execution by 2022
- Implement incentives to reward capture of basic and applied research projects by 2022
- Review base budget allocations and adjust to prioritize support toward a broad spectrum of basic and applied research by 2022
- Maintain active research and workforce development divisions with external revenues reaching $300 million/year by 2025.

2 We will leverage state-of-the-art facilities and equipment in support TEES' broad spectrum of basic to applied research.

ACTIONS:

- Survey key national security partners to determine long-term, unique facility requirements
- Expand our customer user base by developing a national marketing plan to identify potential users of existing nationally unique facilities
- Establish research facility marketing and operations procedures that maximize shared use of existing labs and exploit opportunities for development of nationally unique research capabilities
- Develop and maintain unique research infrastructure in all research priority thematic areas, including energy, national security, infrastructure, materials, manufacturing, autonomy and health

KEY METRICS:

- Establish resilient manufacturing facilities by 2022
- Complete innovation and industry collaboration facility by 2023
- Complete construction of all national security facilities by 2024
- Complete consolidation and expansion of nuclear research facilities by 2025

3 We will expand staff with new approaches to hiring to support TEES' broad spectrum of basic to applied research.

ACTIONS:

- Establish new titles and job descriptions that are more attractive and conducive to multidisciplinary and multiskilled research engineers, technologists, workforce development and commercialization partners
- Develop processes to ensure TEES business units have expanded capacity in human resources to meet increasing demand driven by new applied work
- Define objectives by employee type whereby program leads can provide multidisciplinary approach to performance expectations, monitoring activities and measures of success
- Identify candidates that have a combined business management and engineering profile to help lead initiatives for growth and sustainable success
- Prioritize endeavors to recruit and retain a workforce that's reflective of the ecosystem in which TEES exists and operates

KEY METRICS:

- 100% increase in permanent research personnel by 2025
- 25% increase in PI eligible personnel by 2025
- 15% increase in retention rates
- 15% increase in "attraction" rates

4 We will refresh our brand to more accurately reflect TEES' broad spectrum of basic to applied research.

ACTIONS:

- Determine a baseline for how recognizable the TEES logo and brand are among key stakeholders in the basic and applied research community, and then measure recognition over time
- Develop and deploy strategies to elevate TEES basic and applied research stories in targeted news and social media
- Educate TEES researchers on effective story telling techniques such as the use of good imagery
- Utilize media tracking software to determine where applied research stories are appearing

KEY METRICS:

- Increase brand recognition beyond Texas, across U.S. and globally by fivefold by 2025
- Increase brand recognition with funding agencies by fivefold by 2025
- Increase and deepen relationships with target media outlets by 50% by 2025
- 85% success rate on analytics target measures by 2025

5 We will expand our menu of contract vehicles to support TEES' broad spectrum of basic to applied research.

ACTIONS:

- Secure large-scale, multiyear, multimillion-dollar, multidisciplinary federal applied R&D awards, leveraging the nationally unique suite of applied research and technology development capabilities at the RELLIS Campus
- Establish capacity in managing major applied research contracts
- Secure new contract vehicles (IDIQ, OTA, etc.) that are broad enough to enable multidisciplinary applied R&D activities from various federal sponsors
- Establish Master Research Agreements (MRAs) with strategic industry partners

KEY METRICS:

- Add two major contract vehicles per year with federal sponsors
- Secure at least three IDIQ-type contracts in place by 2025
- Double the value of Consortia and Testing Agreements by 2025
- Maintain 20 active MRAs with industry for a total of $50 million in funding by 2025

6 We will cultivate long-term partnerships with key stakeholders to support TEES' broad spectrum of basic to applied research.

ACTIONS:

- Deploy a strategic investment plan that orients capital spending for the long view based on future casting and strategic assessments of R&D stakeholders and markets, risk assessments and finding discriminating strategic positions
- Maintain the ability to pivot and on-ramp and off-ramp technical focus areas as strategic considerations and market forces evolve
- Deploy an engagement plan for identifying, managing and deepening strategic relationships and engagements identified as critical in the pursuit of significant growth in R&D and Workforce Development
- Deploy a process for identifying and jointly shaping and capturing long-term basic and applied R&D opportunities that leverage our strategic investments and engagements
- Create and maintain a pipeline of multiyear basic and applied R&D opportunities and portfolio forecasts

KEY METRICS:

- Increase the number of strategic partnerships to 20 industry, 10 university and five government by 2025
- Increase the funding from multiyear partnership initiatives to $100 million/year by 2025
- 20 partners and/or organizations co-located in TEES facilities by 2025

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JOIN US

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