# ACADEMIC MASTER PLAN

**TEXAS A&M UNIVERSITY**

VISION
2020

# Introduction

As Texas A&M University entered the 21st Century, its community of stakeholders, including students, faculty, staff, former students, and friends embarked on a grand vision to define the institution's aspirations for the next 20 years. *Vision 2020: Creating a Culture of Excellence* called for a concerted effort to achieve national preeminence, through 12 imperatives that would advance the existing mission and unique heritage of Texas A&M.

### Vision2020 in the Context of a National Call to Action

*Vision 2020* echoed the seminal works of the day related to the future and focus of higher education in America. Works such as the *Kellogg Commission on the Future of State & Land Grant Universities*, coordinated by the National Association of State Universities and Land Grant Colleges (now the Association of Public Land Grant Universities), addressed the need for land grant universities to reaffirm and better communicate their public educational and outreach missions. The Kellogg Commission report highlighted concerns regarding allocation of tax base resources and the role of universities to address societal issues of economic assurance and development, ethical scientific discovery, the democratic political process, and preparing the future leadership of America's workforce in the global community.

The Kellogg Commission recommended a renewed covenant between public universities and the public they serve. This covenant is grounded in historic values of broad access to education, excellent curricula, and research that advances the boundaries of knowledge and the tenets of public governance and finance. All major public universities, and particularly those with the land-, sea-, and space-grant status, carry the expectation for their teaching, discovery, and engagement activities to set the standard for higher education.

As an active participant in the work of the Kellogg Commission, Texas A&M also answered the call to action through the visioning process that yielded the *Vision 2020* report. Through this process, we recognized that Texas A&M is in a unique position to lead our peers because we have an ideal combination of reputational excellence in teaching, an outstanding record of production in discovery and creative endeavor, and a history that demonstrates our capacity to balance engaging communities through a commitment to serve the greater good.

### Staying the Course, Achieving the Vision

Since its formal adoption by the Board of Regents in May 1999, *Vision 2020* has guided the efforts and decisions of Texas A&M University with marked success. Growth in the expertise and number of our acclaimed faculty, recognition for the value of our educational experience to graduates, acceptance as one of only 62 members of the prestigious American Association of Universities, as well as many other accomplishments in our pursuit of *Vision 2020*, have all symbolically placed Texas A&M among the echelon of premier institutions of higher learning.

Set against the backdrop of the world altering events that have impacted our university, our state, our nation, and the world during this same time period, these accomplishments reflect tremendous commitment, resiliency and hard work of our faculty, staff, students and leaders.

### *The Halfway Point*

In the fall of 2008, recognizing the approaching halfway point in the 20-year timeframe for *Vision 2020*, Texas A&M University embarked on a new planning effort to refocus the achievable and uniquely positioned opportunities for impact that can be realized in the next 5 years.  The *Academic Master Plan 2010–2015* as presented in this report is intended to build on the successful endeavors from the previous decade, recognize areas of necessary attention, and continue our commitment to the roadmap outlined in *Vision 2020*.

The Academic Master Plan is assembled from input and dialogue that occurred across the campus in the form of Roadmap committees that were charged with developing specific strategies to advance progress towards the 12 Imperatives of *Vision 2020* in each of the identified missions of modern public universities: teaching and learning, research and engagement.  The groundwork completed by each Roadmap committee will continue to be of vital importance as we assess the plan's strategies and evaluate necessary adjustments each year.  For purposes of the plan, their work has been summarized into a goal with pertinent strategies for progress and appropriate indicators of performance in each mission.

In addition to these Roadmap-specific goals, the university leadership had previously identified five overarching themes or enablers that the Roadmap committees considered as vital for progress in all of the identified strategies.

In this regard, the plan attempts to represent an internal consensus of what the foci should be over the next five years and articulates these here at only a middle level of specificity.  Specific tasks and responsibilities will be administered through the existing and where necessary, newly assigned processes and procedures of the university with an eye towards constant improvement of all.  The utilization of councils, taskforces and informal dialogue will provide continual participation and governance of the progress efforts.

A web presence for the planning process, final strategies, and the online tracking of performance indicators will be the primary communication mode for the plan.  In the coming months, the colleges, divisions, units and branch campuses of the university will review and prepare their own planning documents in appropriate alignment with the strategies suggested here  The college, division, and unit plans will present a more detailed perspective of our cumulative course and will be accessible online as they are completed.

We acknowledge the special missions of our branch campuses, Texas A&M University at Galveston and Texas A&M University at Qatar, and will work closely with them to align their efforts with the strategies identified.

Special effort has been made to review the plan for alignment with other strategic initiatives that impact Texas A&M University and our commitments to our state and nation.  As a good citizen and flagship leader, particular attention was given to the potential cumulative impact of fulfilling these strategies on the statewide impacts sought in The Texas A&M University System *Strategic Plan 2009–2013*.

*Appreciation and Invitation*

Self reflection, assessment, and planning is a time and human capital intensive process. We acknowledge the efforts of all who participated in creation of this plan.

Achieving the goals of the Academic Master Plan will require the active engagement of all who honor the Aggie core values, who strive for Texas A&M University be a national leader in American higher education, who embrace our unique heritage of leadership, integrity, tradition, and academic excellence, and who are committed to serving the greater good.

We welcome your participation……

# Overarching Themes

All planning processes identify guiding principles which help to provide context for the work that is prescribed.  Throughout this plan, reference to the 12 imperatives of *Vision 2020* will be cited for articulation of identified strategies and their targeted impact.

Additionally, five overarching themes were identified by planning process and university leadership as enablers for the success of the strategies in each roadmap.  Continuous assessment and improvement in these essential themes ensures the well being and progress of the institution during any time period, but will be particularly important during the duration of the Academic Master Plan.  Each theme supports multiple aspects of the university mission in teaching and learning, research, and engagement.

*Vision 2020* Imperatives which enable the themes that follow include:
      Imperative 1: Elevate our Faculty and Their Teaching, Research & Scholarship
      Imperative 6: Diversify & Globalize Texas A&M Community
      Imperative 8: Enrich Our Campus
      Imperative 10: Demand Enlightened Governance & Leadership
      Imperative 11: Attain Resource Parity with the Best Public Universities

***Theme 1: Develop human potential and diversity at Texas A&M to ensure the highest quality environment for workplace productivity, learning, and discovery.***

*Strategies:*

1.  Recruit, mentor, and professionally develop a diverse and high-achieving community of faculty, staff, and students through an environment that fosters quality of life and work/life balance and encourages the campus community to have broad knowledge of and be engaged in updating and developing comprehensive campus plans, such as:
    *   Campus Diversity Plan,
    *   Comprehensive Enrollment Management Plan,
    *   Faculty Merit and Advancement Plan,
    *   Student Enrichment and Retention Plan,
    *   Taskforce on Strengthening Our Graduate Programs,
    *   Staff Retention and Advancement Plan
    *   Report from Task Force on Enlightened and Shared Governance

2.  Modify the evaluation process for faculty to give appropriate credit to pedagogical achievement and to participation in multidisciplinary programs and the scholarship of engagement.

*Performance Indicators:*
    ❐  Demonstrate a marked increase in the percentage of faculty and students from currently defined underrepresented groups.
    ❐  Demonstrate that Texas A&M University is widely accepted as a preferred employer by current employees, peer institutions, and the local community alike.

❑ Implement an organizational structure and processes aligned for effective input and communication.

***Theme 2: Expand the global perspective of students, faculty, and staff through involvement in international initiatives and exposure to international experiences that enhance scholarship and experiential engagement.***

*Strategies:*

1. Facilitate and expand a menu of credit-bearing opportunities, varied in duration and credits, led by Texas A&M faculty and offered by U.S. and international partners.

2. Expand the collaborative efforts across academic affairs and student affairs to offer greater opportunities for students to engage in a variety of experiences that enhance their well being, intellect, and responsibility to serving the global society.

3. Facilitate the opportunities for scholars to initiate and develop academic and research collaborations to enhance Texas A&M's progress in research and pedagogical excellence.

*Performance Indicators:*
❑ Increase percentage of graduating students who have participated in credit-bearing international experience.
❑ Increase the number of on-going service learning options abroad for students and student organizations.
❑ Increase the number of students engaged in on-campus globalization activities.
❑ Increase the number of citations attributed to Texas A&M faculty for extension of discipline expertise abroad and for inclusion of international themes, issues, and impacts in their teaching.
❑ Increase the quality of active agreements with international partners.
❑ Continue to improve Texas A&M's performance and perception in international rankings.

***Theme 3: Enhance facilities and infrastructure to support the learning, discovery, and work environments across campus.***

*Strategies:*

1. Ensure that organizational structures and participation processes promote strategic and timely decisions on infrastructures that support excellence in pedagogy, research, and engagement

2. Develop an organizational structure that enhances a culture of responsible and innovative decisions with respect to developing new facilities and renovation, maintenance, and reallocation of existing facilities.

*Performance Indicators:*
❑ Ensure that construction is completed and facilities are occupied and functional.

❒ Review Council for Built Environment processes for effectiveness and implement changes as appropriate.
❒ Complete facilities assessment study.
❒ Develop and implement a strategic deferred maintenance plan.
❒ Initiate a review of infrastructures to support multidisciplinary research, technology mediated instruction, student learning communities, and digital information interface (portals).

## Theme 4: *Marshall financial resources to provide the best value in teaching and learning, research, and engagement opportunities.*

*Strategies:*

1. Develop an organizational structure that considers both groundwork and communication to enhance funding growth from all possible sources and for all missions of the university.

2. Develop an organizational structure that enhances a culture of responsible resource allocation and accountability and that ensures stability in activities and allows for nimble organizational response to new opportunities.

*Performance Indicators:*
❒ Successfully complete the annual budgeting cycle with alignment of priorities and resource allocation.
❒ Implement cost assessment and control mechanisms.
❒ Increase the value of budget sources of funds each year.
❒ Improve business development and partnership building to impact existing and possible revenue sources.
❒ Initiate planning and launch next capital campaign reflecting the priorities of Texas A&M, in coordination with affiliated non-profit organizations, (Texas A&M Foundation, Association of Former Students, 12th Man Foundation and others as appropriate).

## Theme 5: *Provide comprehensive programs that increase the breadth of excellence in the discipline while continuing to maintain and strengthen existing disciplinary excellence.*

*Strategies:*

1. Evaluate the feasibility of and make recommendations about existing and new educational programs that add excellence and capitalize on the strengths of Texas A&M University,

2. Ensure the full mental, physical, and emotional development of all stakeholders of Texas A&M University

*Performance Indicators:*
❒ Integrate the growing wealth of academic programs, particularly in the arts, humanities, and social sciences, into the social fabric of campus and community life.
❒ Facilitate process for evaluating new educational programs.

❑ Initiate a task force to assess academic opportunities in areas of law and the arts.

## Teaching and Learning Roadmap

The Academic Master Plan Teaching and Learning Roadmap committee has defined strategic improvements to the existing educational environment in order to strengthen the preparation of graduates of Texas A&M University for the 21st century and beyond.

The committee focused on the identification of learning outcomes that signify excellence in Texas A&M graduates at the baccalaureate, master's, and doctoral levels and the identification of experiences that support student accomplishment of these learning outcomes. Recognizing the exceptional track record of our university in this regard and the potential for improvement, the committee developed an overarching university learning statement and encourage its approval in conjunction with the identified and recommended learning outcomes:

*Aggies lead the way as responsible, reflective, and respectful lifelong learners.*

Although this focus lends itself to discussion of course-related experiences, the committee acknowledges the importance of extracurricular involvement and encourages an investigation of deeper collaboration between academic affairs and student affairs to firmly establish an exceptional environment.

Building on the record of success, including a university-wide array of coveted teaching awards, highly respected and accredited programs, high graduation rates, and external validation of the education Texas A&M provides, the following strategies outline opportunities for marked improvement over the next five years.

*Vision 2020* Imperatives guiding the following strategies include:
     Imperative 1: Elevate our Faculty and Their Teaching, Research & Scholarship
     Imperative 2: Strengthen our Graduate Programs
     Imperative 3: Enhance the Undergraduate Academic Experience
     Imperative 4: Build the Letters, Arts and Sciences Core
     Imperative 5: Build on the Tradition of Professional Education
     Imperative 6: Diversify & Globalize the Texas A&M Community

(See the full report from the Teaching-Learning Roadmap committee at
     http://www.tamu.edu/provost/amp/documents/TLRCReport2009Jun19.pdf)

Goal:    *Texas A&M will foster a learning environment and enriched educational experiences conducive to the development of responsible, reflective, and respectful lifelong learners as demonstrated by their achievement of common learning outcomes.*

*Strategies*

1. Define a rich set of pathways toward achievement of identified and recommended university

undergraduate and graduate student learning outcomes.

2. Support faculty innovations and enriched, high impact, curricular options for all students.

3. Enhance graduate and professional learning and development experiences.

4. Enhance opportunities for faculty members to strengthen existing and develop new approaches and skills for teaching, particularly in ways that incorporate scholarly findings in pedagogy and technological innovation.

5. Design and implement plans for assessing teaching effectiveness and student achievement of the University Learning Outcomes.

6. Promote continuous improvement through appropriate administrative structures.

7. Enhance scholarship support and preserve the university's reputation for a best-value education in order to actively recruit and advance a high-achieving student body that reflects the diversity of the state and nation.

*Performance Indicators:*
- ❒ Secure Faculty Senate approval of recommended University Learning Outcomes.
- ❒ Facilitate the assessment of the core curriculum led by the Faculty Senate, including a review of the approved University Learning Outcomes.
- ❒ Facilitate the inclusion of a capstone experience in undergraduate research, service learning, internship, performance and/or study abroad to enhance every baccalaureate program.
- ❒ Design and implement a communication plan to create broader awareness of the University Learning Outcomes, accomplishment opportunities and assessment findings.
- ❒ Form a university-level council of representative expertise in teaching and learning to provide input to university decisions that impact the educational environment.
- ❒ Increase coordination between existing administrative functions and offices to better coordinate support for teaching and learning activities.
- ❒ Create opportunities and experiences to ensure that transfer students achieve the University Learning Outcomes while transferring the maximum number of credits toward their desired degrees.
- ❒ Initiate Taskforce on Strengthening Our Graduate Programs to assess quality of life issues for graduate students at Texas A&M and in the local community, including
  - engaging the local community in activities to enhance the experience of graduate students who are working and studying in Bryan-College Station,
  - examining the practices, compensation, and benefits provided to employed graduate students and ensure that these students are recognized and rewarded for their contributions to achieving the University's mission, and
  - providing a wide menu of professional development opportunities for graduate students beyond traditional course and research opportunities.
- ❒ Provide a mechanism for sharing best practices and professional development opportunities through the Center for Teaching Excellence, including enhanced mentoring

opportunities with master teachers and enhanced assistance with technology-mediated instruction.

❒ Expand the knowledge and skills of faculty members in their roles as advisors and mentors to students.

❒ Enhance professional development opportunities in teaching and the scholarship of learning to help faculty members and graduate assistants to use assessment results to improve learning experiences for students.

❒ Establish a university-level organizational structure to aid programs in assessing and designing mechanisms to assess learning outcomes that support programmatic needs and accreditation requirements. Wherever practical, provide central assessment approaches that serve all programs.

❒ Improve teaching evaluation mechanisms and ensure that these mechanisms are clearly part of the recognition and reward systems.

❒ Launch marketing and communication campaign to increase awareness of Texas A&M University and its learning opportunities among high-achieving students of all populations.

❒ Enhance utilization of Prospective Student Centers across the state and increase the involvement of faculty, staff, and students in recruitment activities.

❒ Increase number of scholarships, fellowships, student employment opportunities, and financial aid opportunities specifically targeting priority areas of the university.

❒ Attain stated private philanthropy goal for Operation Spirit & Mind, coordinated by the Texas A&M Foundation for the benefit of Texas A&M University.

- Demonstrate social, cultural, and global competence, including the ability to live and work effectively in a diverse and global society; articulate the value of a diverse and global perspective; and recognize diverse economic, political, cultural, and religious opinions and practices.
- Prepare to engage in lifelong learning.

**University Learning Outcomes for
All Baccalaureate Graduates**

- Master the depth of knowledge required for a degree, including the ability to articulate disciplinary and interdisciplinary theories, concepts, principles, skills, practices; synthesize across courses and experiences; and, apply knowledge from core courses, discipline-based courses, and other experiences in a range of contexts.
- Demonstrate critical thinking, including the ability to evaluate, analyze, and integrate information from a variety of sources; use appropriate strategies and tools to represent, analyze, and integrate information; and, develop critical, reasoned positions.
- Communicate effectively, including the ability to demonstrate effective oral communication skills (or in American Sign Language as appropriate for some); demonstrate effective writing skills; demonstrate effective nonverbal communication skills (which could include use of performance, design, or representations such as maps, tables and graphs); listen actively and critically; present work effectively to a range of audiences; and, effectively communicate original and creative ideas.
- Practice personal and social responsibility, including the ability to practice ethical leadership, recognize an ethical dilemma and apply rational decision-making in order to address it, and choose ethical courses of action in research and practice; and acknowledge and address the consequences of one's own actions; and, engage in local and global civic activities.
- Demonstrate social, cultural, and global competence, including the ability to live and work effectively in a diverse and global society; articulate the value of a diverse and global perspective; and, recognize diverse economic, political, cultural and religious opinions and practices.
- Prepare to engage in lifelong learning, including the ability to exhibit the skills necessary to acquire, organize, reorganize and interpret new knowledge; show proficiency in current technologies and the ability to adapt to emerging technologies; recognize and participate in activities that enhance wellness of body, mind, and spirit; formulate a plan of personal goals for continued professional growth; and, demonstrate intellectual curiosity.
- Work collaboratively, including the ability to participate effectively in teams; consider different points of view; and, work with others to support a shared purpose or goal.

**University Learning Outcomes for All Master's Graduates**

- Master the degree program requirements, including theories, concepts, principles, and practices, and develop a coherent understanding of the subject matter through synthesis across courses and experiences.
- Apply subject matter knowledge in a range of contexts to solve problems and make decisions.
- Use a variety of courses and evaluate multiple points of view to analyze and integrate information and to conduct critical, reasoned arguments.
- Communicate effectively.
- Use appropriate technologies to communicate, collaborate, conduct research, and solve problems.
- Develop clear research plans and conduct valid, data-supported, theoretically consistent, and institutionally appropriate research.
- Choose ethical courses of action in research and practice.
- Demonstrate social, cultural, and global competence, including the ability to live and work effectively in a diverse and global society; articulate the value of a diverse and global perspective; and recognize diverse economic, political, cultural, and religious opinions and practices.
- Prepare to engage in lifelong learning.

**University Learning Outcomes for All Doctoral Graduates**

- Master the degree program requirements, including theories, concepts, principles, and practices; develop a coherent understanding of the subject matter through synthesis across courses and experiences; and apply subject matter knowledge to solve problems and make decisions.
- Apply a variety of strategies and tools, use a variety of courses, and evaluate multiple points of view to analyze and integrate information and to conduct critical, reasoned arguments.
- Communicate effectively.
- Develop clear research plans, conduct valid, data-supported, theoretically consistent, and institutionally appropriate research and effectively disseminate the results of the research in appropriate venues to a range of audiences.
- Use appropriate technologies to communicate, collaborate, conduct research, and solve problems.
- Teach and explain the subject matter in their discipline.
- Choose ethical courses of action in research and practice.
- Demonstrate social, cultural, and global competence, including the ability to live and work effectively in a diverse and global society; articulate the value of a diverse and global perspective; and recognize diverse economic, political, cultural, and religious opinions and practices.
- Prepare to engage in lifelong learning.

# Research Roadmap

Many of the imperatives of *Vision 2020* directly relate to broadening, strengthening, and deepening "research" in its broadest sense at Texas A&M University.  This focus is shared throughout The Texas A&M University System.  Research is broadly construed to include scholarship and creative endeavors in the arts, humanities, and professions.  To become a truly broad-based and comprehensive research university of the first rank, Texas A&M needs to achieve more distinction in all disciplines and across all colleges.

Texas A&M University has become a top research university.  With nearly $570 million annually in research expenditures, Texas A&M ranks among the top-20 research universities in the United States.  The Texas A&M faculty is recognized worldwide for developing problem-solving research breakthroughs focused on improving people's lives and producing a new generation of technology and innovation to drive economic growth.

To become more successful in our research mission we must improve support for research in all its forms across all disciplines, broaden excellence in scholarship and creative endeavor beyond areas where we are currently excellent, enhance opportunities for undergraduate students to participate in discovery and the creation of knowledge in all disciplines (see connections in Teaching-Learning Roadmap), and make good strategic decisions about multidisciplinary focus areas where we have the opportunity to become preeminent in the United States and the world.

The goals and strategies recommended by the Research Roadmap committee are designed to give an impetus to interdisciplinary research concentrations where Texas A&M has the potential to be the very best in the world and to provide greater and better support to the whole scholarly enterprise.

The Research Roadmap strategies that follow are marked by a striving for excellence and beyond excellence—preeminence, a determination to use resources strategically and efficiently, a commitment to diversity and globalization, and a focus on broadening research excellence across the university and the system.

*Vision 2020* Imperatives guiding these strategies include:
> Imperative 1: Elevate our Faculty and Their Teaching, Research & Scholarship
> Imperative 2: Strengthen Our Graduate Programs
> Imperative 3: Enhance the Undergraduate Academic Experience
> Imperative 4: Build the Letters, Arts & Sciences Core
> Imperative 5: Build on the Tradition of Professional Education
> Imperative 7: Increase Access to Knowledge Resources
> Imperative 11: Attain Resource Parity with the Best Public Universities
> Imperative 12: Meet Our Commitment to Texas

 (See the full report of the Research Roadmap committee at http://www.tamu.edu/provost/amp/documents/ResearchRoadmapReportFINAL2009jun24.pdf.)

*Goal: Texas A&M will achieve preeminence in discovery, creativity, and in the advancement of fundamental understanding—both across and within disciplines—to improve lives and society in the 21ˢᵗ century.*

*Strategies:*

1. Employ a continual dynamic process, which considers existing strengths, emerging priorities, and commitment to the comprehensive research mission of Texas A&M, to identify multidisciplinary research areas for targeted personnel and infrastructure investments that can achieve worldwide recognition and impact.

2. Improve disciplinary representation in research administration to include the sciences, social sciences, humanities, and related areas.

3. Support institutional mechanisms to promote excellence in multidisciplinary and multimodal research, especially those that simultaneously reinforce the disciplinary excellence of the colleges and schools.

4. Reinforce the importance of being a comprehensive research university by recruiting and retaining a diverse community of world-class scholars in areas of existing and emerging strengths.

5. Increase and enhance the involvement of graduate and undergraduate students in fundamental discovery.

6. Enhance the physical, virtual, human, and organizational infrastructure to support the discovery mission

*Performance Indicators:*
- ❒ Allocate resources for personnel and infrastructure support in the eight initial University Multidisciplinary Research Initiatives selected by the Research Roadmap committee planning processes (see listing).

**Initial University Multidisciplinary Research Initiatives (2009)**

**Biological Structure and Control**
Bacteriophages (or "phages"), which are viruses that kill bacteria, coupled with modern DNA-based biotechnology, have enormous potential as "green" anti-bacterial agents. Applications include combating bacterial infections in humans, animals, and plants; protection against terrorist bioweapons; food safety; and prevention of bacterial contamination, degradation, and corrosion in key sectors of the economy, such as energy generation and delivery.

**Digital Humanities, Media, & Culture**
Two related grand challenges are addressed: how computing technologies and culture interact, and how cyberinfrastructure can revolutionize humanities and social sciences. Research is focused in four interrelated areas in the digital age—the cultural record, cultural systems, cultural environments, and cultural interactions.

**Modeling and Computational Science**
Disruptive technologies—and the massive amounts of data they produce—are causing a generational shift in the research paradigm. The key to harness these technologies—applied mathematical, statistical, and computational paradigms—will enable new understanding and ultimately practical solutions to problems previously intractable.

**Neuroscience**
Understanding neural function –a multidisciplinary examination ranging from molecular systems to cognition and behavior—is the basis for finding causes and treatments of neurological disorders that impact society. Research will foster cures and therapies for addiction, Alzheimer's sleep disorders, and recovery from neural injury

**Nuclear Solutions for the 21st Century**
Nuclear development offers a wealth of opportunities for enhancing quality of life through medical breakthroughs and energy production, but it also contains seeds for societal destruction. Multidisciplinary strengths in basic and applied nuclear science and nuclear policy development will lead to new approaches and technologies for realizing common good.

**Quantum Science and Engineering**
Quantum mechanics, the crowning achievement of 20th century physics, is yielding phenomenal insights and technologies in the 21st century, ranging from deep insights in philosophy, to engineering advances in lithography and microscopy, to breakthroughs in computation and alternative energy.

**Renewable Energy and Sustainability**
The growing consumption of petroleum products in light of finite deposits, coupled with escalating concern for climate change from burning fossil fuels, has created the grand challenge to find clean and renewable energy sources as well as improved conservation strategies. Research brings to bear a variety of strengths in alternative energy, conservation technologies, and public policy.

**Whole Systems Genomics for Improved Human, Animal, and Environmental Well Being**
The genomics revolution is reshaping the world in fundamental ways. Its contributions to the advancement of agricultural productivity and human and animal health have influenced economics, policy, ethics, geography, and business. Research in whole systems genomics is aimed at human and animal well-being and improved environmental stewardship.

- ❏ Increase evidence of shared infrastructure through cooperative efforts among the university and its schools, colleges, and partners.
- ❏ Increase the percentage of graduate students in the student population.
- ❏ Establish a process for cyclical review and the identification of new University Multidisciplinary Research Initiatives with a special focus on building the comprehensive research mission of the university.
- ❏ Increase the number of successfully developed and the number of realized large-scale research grants.
- ❏ Create sustainable mechanisms for centers and institutes as intellectual homes for multidisciplinary efforts that compliment discipline expertise of colleges and schools.

- ❐ Modify the faculty evaluation process to appropriately credit participation in programs of multidisciplinary excellence.
- ❐ Develop a process to provide proof-of-concept seed funding opportunities in new multidisciplinary research initiatives.
- ❐ Create an advanced study institute to attract a cadre of world-class senior scholars as visitors and permanent residents of Texas A&M.
- ❐ Adopt clear, transparent, and effective hiring mechanisms with full involvement of stakeholders.
- ❐ Design and implement mentoring and support mechanisms that develop the very best faculty and staff members.
- ❐ Increase graduate student funding and benefits.
- ❐ Complete study of the graduate student experience and design and implement mechanism to enhance the role of graduate students in governance of departments and academic programs.
- ❐ Increase number of undergraduate research and internship opportunities and implement new approaches, such as a university-wide summer research/creativity program for undergraduate students.
- ❐ Create programs to recognize excellence among faculty mentors and student researchers.
- ❐ Increase external support from federal, corporate, foundation, and philanthropic sources.
- ❐ Establish process for strategic investments in shared infrastructure with mechanisms for sustaining basic equipment and personnel.

# Engagement Roadmap

(See the full report of the Engagement Roadmap committee at
http://www.tamu.edu/provost/amp/documents/EngagementRoadmapReport2009May22.pdf.)

A hallmark of the nation's land-grant universities, which were commissioned under the Morrill Acts of 1862 and 1890, is the extension of knowledge from the university's faculty and laboratories to the citizenry. Texas A&M has embraced this mandate since its beginning and excels at the endeavor in many disciplines across the campus and in conjunction with our system agency partners in Agriculture & Life Sciences and Engineering.

The opportunity exists to further this effort and reinvigorate our engagement efforts in four areas recommended by the Engagement Roadmap Committee:
- Organizations and entities that expedite transfer of TAMU's intellectual property to private sector commercialization of products and services that benefit society.
- Pre-K–14 education constituencies.
- Non-degree learners and students.
- Industry, government, and nonprofit organizations

Engagement was coined as the term for the third mission of land-grant institutions in the late 1990s as national universities struggled with the ability to articulate their impacts on society under the nomenclature of extension or service, which imply a unidirectional relationship. The Scholarship of Engagement implies that a more inclusive and mutually beneficial partnership is formed whereby a university provides expertise and the partner provides advocacy and support for the university's mission.

The committee recommends a coordination of these activities from a promotion and clearing house perspective but also to alleviate redundancy in the campus community. Additional focus should allow improved access and knowledge of our cumulative engagement enterprise, while striving for an environment where it is easier for partnerships to be identified and formed.

*Vision 2020* Imperatives guiding these strategies include:
    Imperative 1: Elevate our Faculty and Their Teaching, Research & Scholarship
    Imperative 3: Enhance the Undergraduate Academic Experience
    Imperative 5: Build on the Tradition of Professional Education
    Imperative 9: Build Community & Metropolitan Connections
    Imperative 11: Attain Resource Parity with the Best Public Universities
    Imperative 12: Meet Our Commitment to Texas

*Goal: Texas A&M University will elevate its land-, sea-, and space-grant mission by enhancing the quality of and recognition for the scholarly engagement in professional and university service, outreach and practice of its faculty, staff and students.*

*Strategies*

1. Expand the current paradigm of service to an inclusive, mutually beneficial, proactive pursuit of scholarly engagement.
2. Develop administrative support mechanisms to facilitate and articulate the engagement enterprise.
3. Recognize and reward faculty for appropriate contributions to scholarly engagement.
4. Promote elements of the models used successfully by the agencies in agriculture and engineering to focus upon community needs-based, high-impact, self-sustaining engagement programs.

*Performance Indicators:*

❒ Create a coordination "portal" and administrative support that uses multiple access modes to inventory, evaluate, and promote opportunities for mutually beneficial exchange and engagement with key communities and constituencies.

❒ Utilize the "portal" as a central information repository for Texas A&M expertise and engagement "best practices" that can be shared with internal and external constituencies.

❒ Assess the acceptance of and demonstrated progress towards Engagement Roadmap committee recommended activities in the following areas:
   o Organizations and entities that expedite transfer of TAMU's intellectual property to private sector commercialization of products and services that benefit society,
   o Pre-K–14 education constituencies,
   o Non-degree learners and students, and
   o Industry, government, and nonprofit organizations.

❒ Modify the evaluation process for all faculty and staff to appropriately credit participation in the scholarship of engagement proportionally to the scholarship of research and the scholarship of teaching and learning

❒ Develop a meaningful mechanism for assessing the impact of engagement activities to meeting the challenges faced by the university, professions, and society.

❒ Enhance utilization of Prospective Student Centers across the state as conduit for engagement opportunities in communities they serve, particularly urban centers of Texas.

❒ Ensure that alumni, advisory councils, constituent networks, and affiliated organizations are actively engaged in promoting university priorities through strategic engagement activities.

❒ Develop funding models and practices to sustain high-value certificate programs. professional and continuing education programs, and other non-degree programs.

❒ Conduct a complete assessment of each college's engagement activities and opportunities.

❒ Achieve *Carnegie Mellon University Community Engagement Classification.*