



The Constant Pursuit of Discovery

LSU
Office of
**Research &
Economic Development**

Strategic Plan 2025



A laboratory setting with a scientist in the background and various scientific instruments in the foreground. The scientist is wearing safety glasses and a lab coat, and is using a pipette. The foreground shows several microscopes and other lab equipment on a table. The overall lighting is dim and blue-toned.

Strategic Plan

To support a holistic, university-wide environment in which advanced research, effective scholarship, and economic development can thrive and support the LSU Strategic Plan 2025.



Vision

To enhance, expand and positively impact the intellectual enterprise, cultural resources, and economic activities within the State of Louisiana, the Nation, and the world.

Mission

To support a holistic, university-wide environment in which advanced research, effective scholarship, creativity, and economic development can thrive and support the LSU Strategic Plan 2025.

The Office of Research & Economic Development (ORED) is a centralized administrative unit facilitating the faculty, scholarly, and research pursuits in a cohesive, forward-facing research enterprise. It also works to enhance the undergraduate and graduate student learning experience. Numerous Institutes, Centers and service related entities such as the Office of Sponsored Programs and the Office of Innovation & Technology Commercialization report directly to ORED; these units maintain their own strategic plans that align with both this ORED Strategic Plan and LSU's Strategic Plan 2025.



Our Purpose

Louisiana is one of the most culturally and economically diverse states in the country, with significant French and Cajun cultural influences in the southern part of the state, and Spanish, British and Scots-Irish influences in other parts of the state. Substantial Native American and African American populations are found throughout the region, as are some of the largest rural Italian and Hungarian populations in America.

Louisiana ranks 24th in the total gross state economic output in the United States. The backbone of the state's economy is the energy, agricultural, and tourism industries; conventional energy sectors including petroleum, chemical, coal and natural gas play particularly critical roles. For a state of median physical and population size, **Louisiana's economic impact in the energy sector ranks among the highest in the country.** *(continued on next page)*

Nationally, the state is second in natural gas production and seventh in crude oil production. Additionally, Louisiana is home to the nation's largest tonnage port, holds nearly half of the nation's strategic petroleum reserves, serves as a significant freight and shipping hub, and is a culturally significant and popular tourist destination, welcoming more than 30 million annual visitors. Finally, vast agricultural and renewable-based feed stocks as well as aquaculture and sea-food industry also play critical roles in the State's economy.

The state also has its challenges, including poverty, crime and traffic accidents. There are significant health challenges (e.g., obesity, diabetes, etc.) and infant mortality as well.

The State has unique geographical features and locations that make it vulnerable to natural and man-made disasters. **Issues relevant to coastal deltaic sustainability, social and cultural aspects are also therefore unique to Louisiana. The cultural significance, unique population, and health challenges and disparities position the state to benefit considerably from advances in biological, biomedical and biotechnological innovation.** In addition, advanced materials have the potential to impact energy, environmental and biological aspects across the state's economy. Louisiana recognizes these advancements are enabled only by the emerging areas of high performance and core computing and has committed resources to the growth of these integral capabilities.

Louisiana ranks
24th

in the total gross state economic output in the United States.

Louisiana's strengths, challenges, and uniqueness call upon the University to serve its true Flagship role, providing expertise and research in the natural and social sciences, engineering, agricultural, humanities, arts, education, medical and business schools. **LSU's designation as a one of the nation's few Land, Sea, and Space Grant universities positions it to advance research across all of these domains.**

Accordingly, the ORED strategic plan targets the areas of existing and emerging areas of emphasis within the State of Louisiana. These areas of emphasis align with Louisiana's key industries targeted for economic development by the State, viz., Advanced Manufacturing, Agribusiness, Clean-Tech, Digital Media and Software, Energy, Entertainment, Specialty Health Care, and Water Management. This also aligns with the challenges described in the LSU Strategic Plan 2025.

Strategic Goals



Enhance Research Initiatives

- *Focus Areas:* Implement identified LSU Strategic Plan 2025 Priorities through ORED 2025 Initiatives to Enhance LSU's Impact on Research & Economic Development.



Foster Research Enterprise and Catalyze Economic Development

- *Faculty Development/Institutional Resources:* Enable and enhance high impact scholarly research and creative activities on campus.
- *Research Infrastructure:* Foster the necessary infrastructure for an environment that fosters research and catalyzes economic development.
- *Economic Development and Technology Transfer:* Advance and support the state and national economic vitality by translating faculty research and expertise into a collaborative, innovation-focused ecosystem.



Increase Research Communications

- *Research Communication:* Enhance the image of LSU as an internationally prominent research institution.

Enhance Research Initiatives

Focus Areas: Implement identified LSU Strategic Plan 2025 Priorities through ORED 2025 Initiatives to Enhance LSU's Impact on Research & Economic Development

1

OBJECTIVE:

Promote the development of identified cross-cutting collaborative research focus areas in Science, Technology, Engineering & Mathematics and the Arts, Humanities, Social & Behavioral Sciences.

ORED INITIATIVE:

Provide organizational support and seed funding for identified priority programs within the seven ORED research thematic areas.

LSU Strategic Plan
2025



Advancing Arts and Culture



Improving Health and Well-being



Bridging the Coast, Energy and Environment



Fostering Research and Catalyzing Economic Development

ORED Strategic Plan
2025

- Communication and Expression (C&E)
- Individual Behavior and Community Context (IB&CC)
- Biological, Biotechnological and Biomedical Research (B³R)
- Coastal Sustainability and Environment (CS&E)
- Conventional and Renewable Energy (CRE)
- Materials Science and Manufacturing (MS&M)
- Core Computing/ High Performance Computing (CC/ HPC)



2

OBJECTIVE:

Enable partnerships with industry, state agencies, and other stakeholders to develop large multidisciplinary proposals.

ORED INITIATIVE:

Identify, help organize and streamline the preparation of large multidisciplinary and limited submission proposals.

3

OBJECTIVE:

Assist in establishing multidisciplinary academic programs associated with corresponding research efforts.

ORED INITIATIVE:

Form organized faculty groups and leaders to shepherd both research and instructional initiatives in each focus area.

4

OBJECTIVE:

Sponsor multidisciplinary research forums for faculty to interact with each other.

ORED INITIATIVE:

Create a venue for discussion of issues associated with scholars or creative artists who do not receive external funding support.

Foster Research Enterprise & Catalyze Economic Development

Faculty Development/Institutional Resources: Facilitate and enhance high impact scholarly research and creative activities on campus.

1

OBJECTIVE:

Support emerging world-class strengths within the faculty ranks by periodically consulting with deans and associate deans to study, review, and explore strategic ORED investments into their programs.

ORED INITIATIVE:

- Increase and improve research submission processes by evaluating and implementing mechanisms to communicate effectively with faculty about various research opportunities, deadlines, and proposal requirements.
- Support the research enterprise by helping identify and translate key research accomplishments in various colleges through the university's communication channels.

2

OBJECTIVE:

Increase visibility and awareness of faculty expertise and broad domain knowledge through local, regional, state, and national channels.

ORED INITIATIVE:

Establish a blue ribbon panel of LSU faculty and friends to promote memberships and appointments to positions such as national societies, state, federal boards, agencies, and review boards

3

OBJECTIVE:

Support the advancement of postdoctoral fellows by ensuring internal and external compliance with the standards of professional researchers and the academies.

ORED INITIATIVE:

- Provide organizational vehicles to ensure that postdoctoral training is accomplished according to AAAS guidelines
- Organize mentoring training sessions through the ORED Office of Postdoctoral Affairs.

4

OBJECTIVE:

Recruit, mentor, and retain top quality faculty, postdoctoral fellows and graduate students.

ORED INITIATIVE:

Identify sources of funds for recruitment and retention of top-quality faculty through reapportionments of University and Foundation funds.

5

OBJECTIVE:

Lead major research collaborations with state and national peers to secure broad funding and industry support.

ORED INITIATIVE:

Continue specialized support from the Office of Research Advancement (ORA) for the development and submission of large multi-disciplinary proposals.

6

OBJECTIVE:

Enhance the student learning experience through engagement in advanced research and scholarly activities.

ORED INITIATIVE:

Align with the initiatives in the strategic plans of the Office of Research Engagement (ORE).

7

OBJECTIVE:

Provide opportunities, resources and training to enhance the competitiveness of grant applications submitted by LSU faculty.

ORED INITIATIVE:

- Provide organizational and grant preparation support through the ORED Office of Research Advancement (ORA).
- Provide training for scientific writing and proposal preparation
- Notify faculty of specific opportunities by matching faculty research interests to specific requests for applications and extramural funding programs.

Foster Research Enterprise & Catalyze Economic Development

Research Infrastructure: Foster the necessary infrastructure for an environment that fosters research and catalyzes economic development

1

OBJECTIVE:

Obtain resources to help faculty maintain research competitiveness.

ORED INITIATIVE:

Invest F&A funds and facilitate the attraction of private funding for the promotion of interdisciplinary research.

2

OBJECTIVE:

Provide efficient and customer-friendly services from ORED administered offices such as the Office of Research Advancement (ORA), Office of Sponsored Programs (OSP) and the Office of Innovation & Technology Commercialization (ITC).

ORED INITIATIVE:

- Provide administrative and scientific support for the preparation of interdisciplinary grant applications through ORA. Provide academic intelligence on research and development opportunities that are especially suited for LSU faculty.
- Ensure that OSP continues ongoing efforts to increase grant submissions by working closely with individual faculty members.
- Periodically assess feedback mechanisms regarding all services provided by OSP.
- Develop ITC and its service activities to be a leader in the state and region.

3

OBJECTIVE:

Increase research competitiveness by optimizing the tools and processes associated with the research infrastructure to simplify, accelerate, and improve submissions.

ORED INITIATIVE:

Meet with faculty to discuss their needs to help identify opportunities for improvements to research infrastructure.



4

OBJECTIVE:

Ensure exceptional training, support and outreach efforts are in place to provide a comprehensive understanding and compliance with various policies and ethics.

ORED INITIATIVE:

Ensure implementation of communication regarding compliance, research integrity and ethics.

5

OBJECTIVE:

Ensure ORED's policies and procedures are clear and do not go beyond what is necessary to comply with federal, state and other requirements.

ORED INITIATIVE:

- Continually review and update ORED's policies and procedures to remove any unnecessary requirements.
- Conduct workshops for faculty, graduate students and staff.

6

OBJECTIVE:

Identify and facilitate acquisition of resources to reorganize, maintain and acquire research infrastructure.

ORED INITIATIVE:

- Establish mechanisms for long-term sustainability plans for Centers and Institutes reporting to ORED
- Invest F&A funds and facilitate the attraction of private funding for the promotion of interdisciplinary research.

Foster Research Enterprise & Catalyze Economic Development

Economic Development and Technology Transfer: Advance and support the state and national economic vitality by translating faculty research and expertise into a collaborative, innovation-focused ecosystem

1

OBJECTIVE:

Foster transformational fundamental science and grow interdisciplinary research.

ORED INITIATIVE:

Prioritize current and emerging focal areas, and promote and support interdisciplinary efforts in these domains.

2

OBJECTIVE:

Develop the LSU Innovation Park and the emerging research zone in accordance with the LSU Master Plan to help connect researchers, students, and other entrepreneurs in a near-campus ecosystem environment.

ORED INITIATIVE:

Support the LSU Master Plan and the LSU Innovation Park Master Plan, identify appropriate services and capabilities, and showcase to external stakeholders.

3

OBJECTIVE:

Support and incentivize technology commercialization, and expand opportunities for intellectual property development, university-industry interaction, and entrepreneurship across the research enterprise.

ORED INITIATIVE:

- Foster stronger interactions and collaborations between faculty, Louisiana Business and Technology Center (LBTC) and companies located in the emerging technology zone.
- Grow the Office of Innovation & Technology Commercialization (ITC) and its service activities to be a leader in the state and region.

4

OBJECTIVE:

Develop programs for faculty outreach, awareness and education as related to intellectual property, technology commercialization, and start up creation.

ORED INITIATIVE:

Conduct workshops for faculty on intellectual property, technology commercialization and start up creation.

5

OBJECTIVE:

Cultivate, encourage, and advise university-industry partnerships based on translating research.

ORED INITIATIVE:

- Identify and support opportunities for research-industry engagement.
- Continue streamlining protocols for engaging in industry sponsored research.
- Support the development of the LSU master planned emerging research zone

6

OBJECTIVE:

Promote workforce development with State agencies.

ORED INITIATIVE:

Map university research with Board of Regents Louisiana First plan and the Louisiana Economic Development's Blue Ocean Strategy.

7

OBJECTIVE:

Expand university connectivity with local, state, and national agencies.

ORED INITIATIVE:

Increase interactions with economic development organizations locally, statewide and nationally.

Enhance Research Communications

Research Communication: Enhance the image of LSU as an internationally prominent research institution

1

OBJECTIVE:

Increase the visibility of notable research faculty and their achievements (ie: through campus-wide communications, in local and national media, with appointments to professional associations, funding agencies' communications, etc.)

ORED INITIATIVE:

- Establish a research communications department within ORED.
- Optimize the utilization of digital and social media tools (web page, Facebook, Twitter, Blogs, etc.) to enhance our image.
- Facilitate faculty nomination procedures from departments and colleges for national and international awards.
- Increase the visibility of on-campus awards such as Rainmakers, Distinguished Research Masters, and the Presidential Award for Discovery.
- Connect LSU experts with national media.

2

OBJECTIVE:

Illustrate the university's value and impact by publishing appropriate content for a broad range of audiences.

ORED INITIATIVE:

- Continually enhance the quality of publications such as the Research Magazine and periodic e-news bulletins.
- Promote excellence by increasing the visibility of faculty research-based awards from internal programs like Rainmakers and Distinguished Research Masters to nationally renowned accolades.
- Promote the visits of nationally and internationally well-known scholars to campus.

3

OBJECTIVE:

Promote and develop a research-aware community, both inside and outside of LSU.

ORED INITIATIVE:

- Continue to curate LSU Science Café and other public engagement events to promote and communicate the value of university research.
- Develop tools and processes to efficiently and effectively communicate research opportunities to faculty.
- Develop and sustain relevant content and programs to inform legislators, elected officials and other policy officials about the impact of LSU research in the local, regional and national communities (ie: LSU Research Works campaign lsu.edu/researchworks)
- Offer resources and professional development opportunities to research faculty and staff to strengthen communication skills.



Individual Behavior & Community Context:

Research on the individual behavioral and cognitive aspects of varied social phenomena such as health, crime, developmental trajectories over the life course, and socioeconomic attainment and how historical and cultural community contexts produce differential outcomes.

Communication & Expression:

The scientific, humanistic and artistic dimensions of the human communicative experience and how they intersect with and augment in novel ways the process of discovery.

Biological, Biotechnology & Biomedical Research:

Important basic and applied problems in specific areas of biology will be addressed by interacting groups in the sciences, engineering, and agriculture as well as those in the humanities and social sciences.

Coastal Sustainability & Environment:

Environmental, social and economic sustainability in coastal landscapes of the Mississippi River and deltaic coasts around the world.

Conventional and Renewable Energy:

Exploration of efficient extraction of conventional energy and renewable energy in a sustainable fashion for various applications.

Materials Science & Manufacturing:

The science and engineering of the fabrication and characterization of advanced materials and their applications in various sectors of our economy and daily life.

Core Computing/ High Performance Computing:

Enable breakthroughs in computational science and its applications in various areas in science, engineering, arts and humanities.

The Office of Research & Economic Development will use this document as a guide over the next eight years. Administrators, faculty, and staff have contributed to the development of this plan, and we invite the LSU community and our constituents to stay abreast of the success of this plan as it is implemented in concert with the University's Strategic 2025 Plan.



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