



The Constant Pursuit of Discovery

2012



Office of
Research & Economic Development

Strategic Plan

To support a holistic, university-wide environment in which advanced research, effective scholarship, and economic development can thrive and support the LSU Flagship 2020 Agenda.



Preamble

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 economy is the energy, agricultural, and tourism industries. Conventional energy sectors including petroleum, chemical, coal and natural gas play critical roles in the State's economy. Louisiana produces approximately 18% of the oil and 24% of natural gas which power the Nation's economy. The recent discovery of shale gas reserves in the State is another important future economic resource for the State. 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, violent 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 location that make it vulnerable to natural and man-made disasters. Issues relevant to the coastal deltaic sustainability, social and cultural aspects are also therefore unique to Louisiana. Together with this we have vast potential for biological, biomedical and biotechnological developments within the State. Invariably intertwined into the areas of energy, environmental and biological aspects is the avenue of advanced materials. The State has put increasing emphasis in the emerging area of high performance and core computing which is integral to all of the above areas.

In order to bolster and support the above areas of Louisiana's strengths and uniqueness, the State requires manpower and research that are located in the natural and social sciences, engineering, humanities, arts, education and business schools in the University. There are, of course many other areas of strength that are unique because of LSU's designation as a Land, Sea and Space Grant university in the Nation. Thus 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 the 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.

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The Office of Research and Economic Development (ORED) is a centralized administrative unit facilitating the scholarly and research enterprise of the faculty. It also facilitates in enhancing the undergraduate and graduate student learning experience. A number of Institutes, Centers and, units most notably the Graduate School, the Office of Undergraduate Research and service related entities such as the Office of Sponsored Programs (OSP), and the Office of Intellectual Property, Commercialization & Development (OIPCD) report directly to ORED. These units have their own strategic plans that interdigitates with the ORED strategic plan. This plan closely aligns with the LSU Flagship 2020 goals, viz., Discovery, Learning, Diversity and Engagement.

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, and economic development can thrive and support the LSU Flagship 2020 Agenda.

Strategic Goals

Enhance Research Initiatives

- *Focus Areas:* Create a supportive environment for established and/or emerging multidisciplinary research initiatives with local, national and international partners.

Develop Research Enterprise and Expand Economic Development

- *Faculty Development/Institutional Resources:* Enable and enhance high impact scholarly research and creative activities on campus.
- *Research Infrastructure:* Facilitate the necessary infrastructure for an environment that promotes a thriving research enterprise.
- *Economic Development/Technology Transfer:* Advance and support the economic and work force development emphasis in the State.

Increase Research Communications

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



Enhance Research Initiatives

Focus Areas: Create a supportive environment for established and/or emerging multidisciplinary research initiatives with local, national and international partners.

Strategies	Initiatives
Identify and enable the establishment of focus areas in the Science, Technology, Engineering & Mathematics (STEM) and the Humanities, Arts & Social Sciences (HASS) disciplines where cross-cutting, collaborative research efforts are possible.	Promote the establishment of research focus areas which are evolving to areas of excellence at LSU. Because of existing strengths and/or opportunities these currently are: (<i>see diagram, page 10</i>) <ul style="list-style-type: none"> a. Materials Science and Engineering (MS&E) b. Coastal Sustainability and Environment (CS&E) c. Conventional and Renewable Energy (CRE) d. Core Computing/High Performance Computing e. Biological, Biotechnological and Biomedical Research (B³R) f. Communication and Expression (C&E) g. Individual Behavior and Community Context (IB&CC)
Enable partnerships with industry, state agencies, and other stakeholders to develop large multidisciplinary proposals.	Identify, help organize and streamline the preparation of large multidisciplinary and limited submission proposals.
Assist in establishing multidisciplinary academic programs associated with corresponding research efforts.	Form organized faculty groups and leaders to shepherd both research and instructional initiatives in each focus area.
Sponsor multidisciplinary research forums for faculty to interact with each other.	Create a venue for discussion of issues associated with scholars or creative artists who do not receive external funding support.

Performance Indicators

Number of organized research groups or institutes activated for each focus area

Multidisciplinary proposals submitted tracked to focal areas

Research forums and scholarly lectures organized

Number of limited submission proposals submitted

Research partnerships with industry and non-profit agencies

Support for instructional initiatives (such as IGERT and other graduate and undergraduate research traineeship grants) in the focus areas



Develop Research Enterprise and Expand Economic Development

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

Strategies	Initiatives
Consult with deans and associate deans of various colleges periodically to study and review ORED investments in their programs and also to support emerging world-class strengths within the faculty ranks	<ol style="list-style-type: none"> 1. Consult with deans and associate deans of various colleges periodically to study and review ORED investments in their programs and also to support emerging world-class faculty. 2. Evaluate mechanisms to communicate effectively with faculty about various research opportunities, deadlines and proposals requirements. 3. Periodically identify key research accomplishments in various colleges and effectively communicate them to the public via various media.
Promote and support the recruitment, mentoring and retention of top quality faculty, postdoctoral fellows and graduate students.	Identify sources of funds for recruitment and retention of top-quality faculty through reapportionments of F&A and Foundation funds
Facilitate faculty appointments to national societies, state, federal boards, agencies and review boards	Establish a blue ribbon panel of LSU faculty and friends to promote the memberships in prestigious positions such as the national academies.
Facilitate research collaborations with other institutions within the state and regionally.	Create or establish a focal point at the Office of Sponsored Programs (OSP) to develop infrastructural support for the development and submission of large multi-disciplinary proposals.
Enhance the student learning experience through engagement in advanced research and scholarly activities.	Align with the initiatives in the strategic plans of the Office of Undergraduate Research (OUR) and the Graduate School (GS).

Performance Indicators

- Number of Proposals or Grants submitted
- Number of Proposals or Grants awarded
- Annual Research expenditures
- Annual Research Dollars received
- Total Research dollars held in a year
- New faculty honors and appointments
- High impact publications, performances and exhibitions
- Summer stipends for faculty
- Extramural travel funds disbursed
- Grant writing workshops for faculty



Develop Research Enterprise and Expand Economic Development

Research Infrastructure: Facilitate the necessary infrastructure for an environment that promotes a thriving research enterprise.

Strategies	Initiatives
Obtain resources to help faculty maintain research competitiveness.	Facilitate the re-distribution of F&A, and acquisition of private donations for multidisciplinary research.
Provide efficient and customer-friendly services from ORED administered offices such as Office of Sponsored Programs (OSP) and the Office of Innovation & Technology Commercialization (TIC).	<ol style="list-style-type: none"> 1. Continue with the streamlining of procedures and policies at OSP and integrate more closely with Sponsored Program Accounting 2. Periodically assess feedback mechanisms regarding different services provided by ORED. 3. Establish a standing committee on Research Related Administrative Procedures (RRAP).
Ensure that exceptional training, support and outreach efforts are in place to provide a comprehensive understanding and compliance with various policies and ethics.	Ensure implementation of communication regarding compliance, research integrity and ethics.
Develop policies and procedures to clarify ambiguous research-related items such as grant credit for Centers and Institutes.	Conduct workshops for faculty, graduate students and staff.
Identify and facilitate acquisition of resources to re-organize, maintain and acquire research infrastructure.	<ol style="list-style-type: none"> 1. Establish mechanisms for long-term sustainability plans for Centers and Institutes reporting to ORED 2. Re-establish a regular schedule of reviewing Centers and Institutes by the Council on Research (CoR). 3. Facilitate the submission of large infrastructure grants from government agencies and Foundations.

Performance Indicators

Number of faculty workshops held (procedures, policies and compliance).

Tracking efficiency measures (time to award and time to contract) of proposal development and contracts negotiated.

Number of key policies developed to facilitate research and compliance procedures

Equipment repair funds disbursed

Major instrumentation modernization and acquisition efforts

Centers/institutes reviewed

Funds acquired for infrastructure developments



Develop Research Enterprise and Expand Economic Development

Economic Development/Technology Transfer: Advance and support the economic and work force development in the State.

Strategies	Initiatives
Facilitate the development of the LSU Innovation Park as an economic development engine.	Re-invigorate the LSU Innovation Park master plan in concert with the Office of the Chancellor.
Expand opportunities for intellectual property development, commercialization and company start-ups.	<ol style="list-style-type: none"> 1. Increase interactions with Louisiana Business and Technology Center (LBTC). 2. Continue to promote and streamline the TIC office and its service activities.
Develop programs for faculty outreach, awareness and education as related to IP and licensing.	Conduct workshops for faculty on IP and commercialization.
Encourage partnerships with industry to solve real world challenges.	Continue streamlining protocols for engaging in industry sponsored research.
Promote workforce development with State agencies.	Map university research with Board of Regents Louisiana First plan and the Louisiana Economic Development's Blue Ocean Strategy.
Expand university connectivity with local, state and national agencies	Increase interactions with economic development organizations locally, statewide and nationally.

Performance Indicators

Number of Invention Disclosures

Number of Patent Applications Filed

Number of Patents Issued

Number of License Agreements

Total Active Licenses

Industry Sponsored Research Agreements

Start-up Companies formed based on university technology

South Campus Use for Research and Commercialization

Faculty Workshops/Events on Intellectual Property and Technology Transfer



Increase Research Communications

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

Strategies	Initiatives
Increase the visibility of local and national press placement of research-related notable achievements	<ol style="list-style-type: none"> 1. Implement the communication initiative within ORED via the newly created research communications department within the Office of Communication & University Relations. 2. Increase the utilization of the on-line tools (web page, Facebook, Twitter, Blogs, etc.) to enhance our image.
Publish research bulletins and magazines for worldwide distribution.	Continually enhance the quality of publications such as the Research Magazine and periodic bulletins.
Increase the visibility of on-campus awards such as Rainmakers, Distinguished Research Masters (DRM) etc., promote the recognition of faculty members in national academies, research boards, foundations etc., and facilitate the support for off-campus assignments.	<ol style="list-style-type: none"> 1. Facilitate faculty nomination procedures from Departments and Colleges for national and international awards. 2. Promote the visits of nationally and internationally well-known scholars to campus.
Increase faculty research visibility that brings recognition to the University.	Provide LSU experts to national media on significant matters.

Performance Indicators

Number of national press placements and media releases

Promote recognition of faculty appointments to major assignments, honors, awards etc.

Articles in specialty and trade publications highlighting research

Hits on web sites and other on-line tools

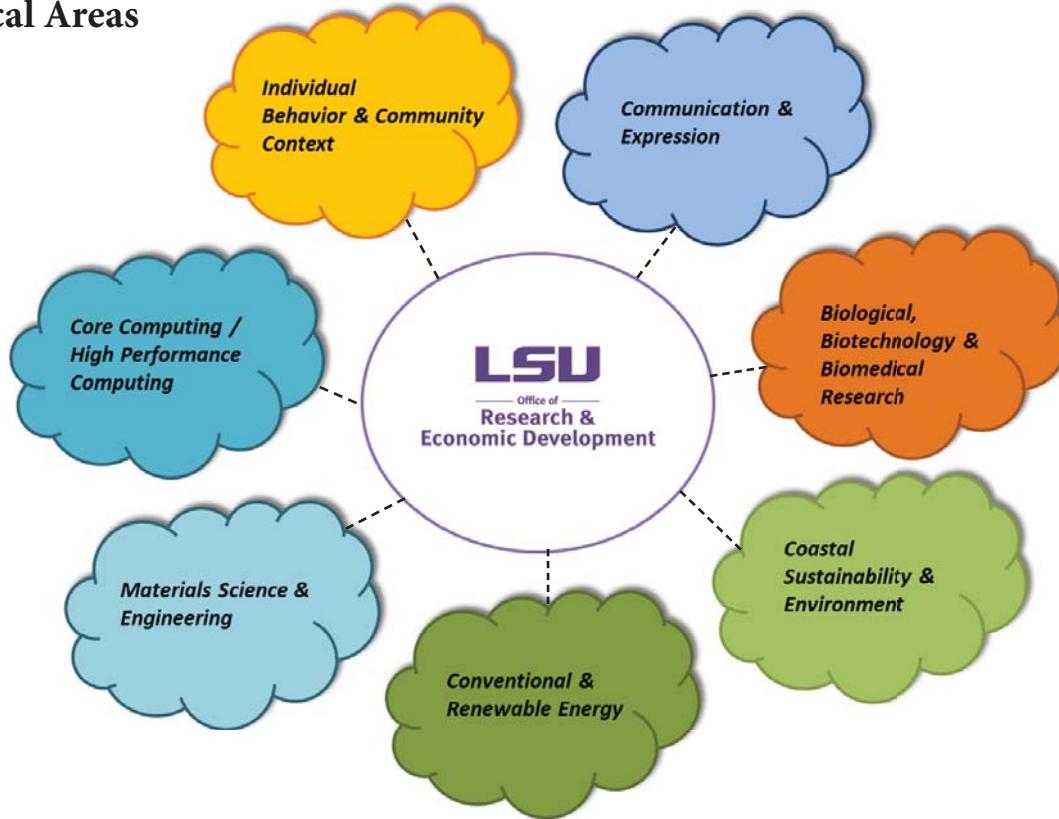
Chancellor's Distinguished Scholars brought to campus

Research communication highlights to public

LSU experts on national media



ORED Focal Areas



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 (B³R):

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 (CS&E):

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

Conventional and Renewable Energy (CR&E):

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

Materials Science & Engineering (MS&E):

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 (CC/HPC):

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







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