

## **DIVISION OF RESEARCH AND TECHNOLOGY TRANSFER**

### **Mission**

The Division of Research and Technology Transfer fosters, supports, and promotes research, scholarship, and creative activities and facilitates the dissemination and application of knowledge.

### **Vision**

The Division of Research and Technology Transfer will:

- Provide leadership that will enable Oklahoma State University to achieve national prominence in research, scholarship and creative activities;
- Be recognized as a model program for interdisciplinary collaborations and partnerships among academic institutions and with public and private sectors;
- Positively impact economic development and the quality of life through effective management and commercialization of intellectual property; and
- Provide oversight and leadership necessary for Oklahoma State University to become a model program nationally for research compliance and effective research administration.

### **Core Values**

**Excellence** – We seek excellence in all our endeavors, and we are committed to continuous improvement.

**Intellectual Freedom** – We believe in ethical and scholarly questioning in an environment that respects the rights of all to freely pursue knowledge.

**Integrity** – We are committed to the principles of truth and honesty, and we will be equitable, ethical, and professional.

**Service** – We believe that serving others is a noble and worthy endeavor.

**Diversity** – We respect others and value diversity of opinion, freedom of expression, and other ethnic and cultural background.

**Stewardship of Resources** – We are dedicated to the efficient and effective use of resources. We accept the responsibility of the public trust and are accountable for our actions.

## Goals, Critical Success Factors, Objectives, and Strategies

**Goal 1. Increase Oklahoma State University's productivity in research, scholarship and creative activities.**

### Critical Success Factors:

- Increased national reputation and ranking in lists of research activity from the National Science Foundation, National Research Council, US News and World Report, and the University of Florida, aiming for top 75
- Increased research grant income and expenditures by at least 50% (in constant 2004 dollars) commensurate with that required to reach a top 75 ranking

### Objectives:

**Objective 1.1:** Oklahoma State University will submit 50% more proposals and increase the number of grants obtained by faculty.

### Strategies:

- The division will utilize proposal writing workshops and seed grant competitions from the EPSCoR Program.
- The division will hire external consultants to run one "grantsmanship" seminar, and one proposal assistance workshop per year.
- The division will strengthen central research administration in order to assist submission of research proposals and management of grants and contracts by hiring new Assistant VP for Sponsored Research and new Contracts specialist.
- The division will adopt an integrated, paperless, routing and tracking system for research proposals and awards and put in place by summer 2006.
- The division will develop research relationships with the private sector using intellectual property and technology transfer activities as a vehicle.

**Objective 1.2:** The division will heighten the research reputation in selected areas of research where OSU can claim core strengths.

### Strategies:

- The Vice President for Research and Technology Transfer will participate in discussions with the Provost, Deans and department heads to identify focus areas and target core research areas in which Oklahoma State University can achieve a high national reputation, focusing on institutional strengths.
- The Vice President for Research and Technology Transfer will participate in discussions with the Provost, Deans and department heads to invest in research-active faculty in targeted core research areas; aim to increase strength in each of these areas by 3-5 faculty per year over the next 5 years.

- The division will work with the office of the Provost and Senior Vice President to create a program to compete for National Academy membership and to increase the number of faculty who are members of the National Academies.

**Objective 1.3:** The division will pursue interdisciplinary research projects.

Strategies:

- The division will assist faculty members with large-scale interdisciplinary research projects and collaborate with EREDF on such projects.
- The division will continually monitor all federal Requests for Proposals for interdisciplinary research through the central office of sponsored research.
- The division will encourage collaborations across departments, colleges, and with external agencies (including federal, state and private sector partners) by channeling resources into these activities (e.g. start-up, cost-share, core facilities, etc.).
- The division will make available additional incentives for interdisciplinary initiatives, including administrative support, facilities, and funding.
- The division will establish a seed grant program to support interdisciplinary research projects, when funding is available.

**Objective 1.4:** Construct a university Interdisciplinary Research Center.

Strategies:

- The division will make consistent and persistent efforts to obtain federal funding through the university's Federal Agenda.
- The division will make consistent and persistent efforts to obtain state funding through the university's Oklahoma Legislature Agenda (e.g. bond issue).
- The division will submit proposals to appropriate private foundations (Noble, Reynolds, etc.).
- The division will submit infrastructure proposals to federal agencies (e.g. the National Science Foundation) via peer reviewed competitive grant programs.

**Goal 2. Re-align resources to support research growth.**

**Critical Success Factors:**

- 50% of F&A income from research grants re-directed directly to support research activities.
- Increase by 100% the existing start-up fund.
- Increase by 50% the existing cost-share fund.
- Establish a fund of \$500k per year for support of shared facilities.
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*Objectives:*

**Objective 2.1:** Increase the Start-Up pool.

Strategies:

- The division will seek to establish a base-funding level of \$1M.
- In addition to the base funding, the division will seek to add an amount equal to 30% of the central university's share of F&A income.

**Objective 2.2:** Increase in the Cost-Share pool.

Strategies:

- The division will seek to establish a base funding level of \$500k.
- In addition to the base funding, the division will seek to add an amount equal to 10% of the central university's share of F&A income.

**Objective 2.3:** Establish a Core Facilities support fund.

Strategies:

- The division will seek to re-direct an amount equal to 5% of the total F&A collected by the university into a facilities fund for use in support of multi-user core facilities across campus.
- The division will seek to establish a Facilities Use committee to direct these funds to where most needed.

**Objective 2.4:** Establish a research Facilities renovation fund.

Strategies:

- The division will seek to re-direct an amount equal to 5% of the total F&A collected by the university into a research facilities renovation fund for assistance with renovation across campus.
- The division will seek to establish a Facilities Use committee to direct these funds to where most needed.

**Goal 3. Build and strengthen all aspects of research compliance consistent with federal and state laws, and with the ethical conduct of research.**

**Critical Success Factors:**

- Successful compliance with all federal and state mandates.
- Achieving a compliance system that is fully integrated with and supported by the research enterprise at OSU.

*Objectives:*

**Objective 3.1:** Provide all necessary resources to all compliance functions.

Strategies:

- The Vice President for Research and Technology Transfer will meet regularly with unit directors to consistently review resources and strategies.
- The division will continually assess the effectiveness of all compliance functions and ensure units have in place effective quality assurances programs.
- The Vice President for Research and Technology Transfer will be an advocate for the unit directors for all necessary resources at the central administration and executive level.

**Objective 3.2:** The division will ensure integration of compliance functions with the research enterprise.

Strategies:

- The division will ensure that personnel are in place who understand the research component and the regulations, policies and guidelines, and who are able to demonstrate that compliance is a necessary part of a successful research program.
- The division will adopt a paperless electronic approach to compliance, integrated with the systems for proposal submission and award monitoring.

**Goal 4. Provide systems and functions that enable Oklahoma State University faculty members, staff and students to contribute to economic development of the State of Oklahoma and the nation.**

**Critical Success Factors:**

- Generate one invention disclosure per year for every \$2M in research funding
- Generate approximately 15 income-yielding licenses over the next 5 years
- Generate approximately 5-15 new research agreements with the private sector over the next 5 years
- Generate at least 1 Oklahoma State University technology-related start-up company per year over the next 5 years
- 2-5 OSU research laboratories collaborating with companies in the Oklahoma Technology and Research Park
- Fill (to the 90% level) the private sector research space at Venture 1 in the Oklahoma Technology and Research Park by mid 2005
- Begin construction of second multi-tenant building (Venture 2) in the Oklahoma Technology and Research Park by mid 2005

*Objectives:*

**Objective 4.1:** The division will align strategies with the goals of the EDGE program.

Strategies:

- The Vice President for Research and Technology Transfer will become a member of strategic planning committees at the state level, as formed by the Chancellor for Higher Education, the Secretary of State for Science and Technology, and other key administrators.
- The division will give input to, and follow recommendations of, all future planning emerging from the EDGE initiative with regard to intellectual property creation and especially technology transfer.
- The division will establish innovative partnerships with other Oklahoma universities, local and state government entities, and the private sector to enhance intellectual property production and the rate of technology transfer.

**Objective 4.2:** Increase numbers of research inventions, patents, licenses, equity agreements and research partnerships with the private sector.

Strategies:

- The division will organize regular technology transfer seminars, workshops, discussion forums, etc. to educate and encourage members of faculty to participate in the technology transfer process.
- The division will create a “New Inventor” award for any faculty member or student publishing a patent for the first time.
- The division will make technology transfer a major theme of Research Week activities each year.
- The division will continually address the issue of encouraging academic career success through participation in technology transfer activities with deans, department heads and members of faculty, with consistent a reward structure for members of faculty who work in these areas.
- The division will partner with the private sector in research collaborations and agreements.
- The division will improve and streamline the technology transfer process through the Office of Intellectual Property Management and Oklahoma State University Legal Counsel.

**Objective 4.3:** Provide all necessary resources to the Office of Intellectual Property Management.

Strategies:

- The Vice President for Research and Technology Transfer will meet regularly with staff from the Office of Intellectual Property Management to consistently review resources and strategies.
- The division will hire a full-time Director of Intellectual Property and Technology Transfer by the end of FY05.
- The division will hire 2 licensing/marketing specialists by the end of FY06.
- The division will hire contracting expert to expedite contract negotiation and agreements.
- The division will institute a consistent, effective operating process/system for the Office of Intellectual Property Management by the end of FY06 to satisfactorily meet the university’s intellectual property needs.
- The division will continually assess the effectiveness of all related functions and ensure units have in place effective assessment programs.
- The division will be an advocate for all necessary resources at the central administration and executive level.

**Objective 4.4:** Ensure integration of the functions and procedures of the Office of Intellectual Property Management with the research enterprise.

Strategies:



- The division will ensure that personnel are in place who understand the research component and the constraints and issues related to the disclosing of intellectual property, and the marketing thereof.
- The division will adopt a paperless electronic approach to intellectual property management, integrated with the systems for contract negotiation, proposal submission, and award and project monitoring.

**Objective 4.5:** Contribute to the development, marketing and overall success of the Oklahoma Technology and Research Park.

Strategies:

- The division will collaborate with units necessary for the development and marketing of the Research Park, including the Education, Research and Economic Development Foundation, the Oklahoma Technology Research Park Joint Board, the Park Marketing Liaison Group, and all other relevant organizations and units.
- The division will identify potential private sector companies to move into the OTRP.
- The division will create list of benefits for companies to move into the OTRP, consistent with OSU's land-grant mission and multiple functions.

**Goal 5. Provide effective management to meet the needs of the Environmental Institute, the EPSCoR program, and the Fish and Wildlife Unit.**

**Critical Success Factors:**

- Growth in the Environmental Institute, the EPSCoR program and the Fish and Wildlife Unit as evidenced by increases in the number of awarded research proposals and the number of members of faculty engaged in research collaborations with or through these programs.

*Objectives:*

**Objective 5.1:** The division will provide all necessary resources to allow these units to complete their missions.

*Strategies:*

- The Vice President for Research and Technology Transfer will meet regularly with unit directors to consistently review resources and strategies.
- The division will continually assess the effectiveness of all unit functions and ensure units have in place effective quality assurances programs.
- The division will be an advocate for the unit directors for all necessary resources at the central administration and executive level.
- The division will ensure integration of functions with the university research enterprise.
- The division will ensure that personnel are in place in each unit who understand the overall research enterprise.
- The division will support research and associated funding raising initiatives at the Tall Grass Prairie Reserve.

**Goal 6. Increase the numbers of students and postdoctoral assistants engaged in research activities.**

**Critical Success Factors:**

- Increase by 25% over 5 years in the numbers of graduate students engaged in thesis research
- Increase by 25% over 5 years in the numbers of undergraduate students engaged in research
- Increase by 100% the number of postdoctoral assistants engaged in research

*Objectives:*

**Objective 6.1:** Increase the number of graduate students engaged in thesis research.

Strategies:

- The division will work with the Dean of the Graduate College and the Associate Vice President for Research to increase the average level of graduate student stipends by 25% over 5 years.
- The division will work with the Dean of the Graduate College and the Associate Vice President for Research to increase the number of interdisciplinary research graduate degree programs by 3 over the next 5 years.
- The division will work with the Dean of the Graduate College and the Associate Vice President for Research and the Oklahoma State University Foundation to add a position of Development Officer to support the Office of the Vice President for Research and Technology Transfer and the Graduate College to increase funding for graduate student scholarships and fellowships.
- The division will establish internship agreements with commercial partners and with private research foundations to support graduate students as part of their research program.

**Objective 6.2:** Increase the number of undergraduate graduate students engaged in research.

Strategies:

- The division will work with the office of the Provost and Senior Vice President to increase the number of and funding for scholarships available for undergraduates to participate in research.
- The division will work with the office of the Provost and Senior Vice President and the Oklahoma State University Foundation to increase funding for undergraduate student scholarships and fellowships.

**Objective 6.3:** Increase the number of postdoctoral assistants engaged in research.

Strategies:

- The division will devise innovative postdoctoral assistant training programs and funding mechanisms.
- The division will establish internship agreements with commercial partners and with private research foundations to support postdoctoral assistants as part of collaborative research programs.

**Goal 7. Enhance Arts, Humanities and Social Science Research, and Scholarship.**

**Critical Success Factors:**

- Positive articles in news media concerning Arts and Humanities scholarship at Oklahoma State University
- Increased internal funding to support such scholarship

*Objectives:*

**Objective 7.1:** Improve funding for and recognition of scholarship in the Arts and Humanities.

Strategies:

- The division will include art exhibits, musical and theatrical performances, and humanities research symposia in Research Week each year.
- The division will feature Arts and Humanities research in *Vanguard* magazine each year.
- The division will hold specific grantsmanship workshops focused on Arts and Humanities research and scholarship.
- The division will establish internal grant scheme to support Arts & Humanities research, and scholarly and creative activities.

**Goal 8. Improve the overall image of Oklahoma State University as a comprehensive Research University**

**Critical Success Factors:**

- Positive articles in news media concerning research at Oklahoma State University
- Positive feedback from external agencies concerning research activities at Oklahoma State University

*Objectives:*

**Objective 8.1:** Promote research and scholarship at Oklahoma State University.

Strategies:

- The division will organize Research Week every year.
- The division will include the full spectrum of scholarly activities at Oklahoma State University in Research Week activities.
- The division will publish Vanguard magazine each year and distribute to all relevant external and internal agencies.
- The division will publish other articles, leaflets, etc. relating to research and scholarly accomplishments at Oklahoma State University.

**Goal 9. Improve representation by under-represented groups in research and scholarly activities across the campus.**

**Critical Success Factors:**

- Increase by 1-3 the number of faculty members from under-represented groups receiving university research awards and other recognition at Oklahoma State University, each year.
- At least 10% of the research featured in internal research publications from faculty members from under-represented groups.
- At least one research proposal per year to federal agencies to promote research by under-represented groups.

*Objectives:*

**Objective 9.1:** Increase numbers of faculty members, postdoctoral assistants and graduate students participating in research and scholarly activities.

Strategies:

- The division will support the Office of Institutional Diversity in applying for federal research programs to support under-represented groups.
- The division will invite successful scholars of national reputation who are from under-represented groups to campus to present colloquia and meet students and faculty.

**Objective 9.2:** Increase numbers of faculty members, postdoctoral assistants and graduate students participating in technology transfer and economic development.

Strategies:

- The division will work with OSU-Okmulgee and the Tribal Nations to establish partnerships for innovation and technology transfer with the goal of establishing new minority-owned high technology start-up businesses in Oklahoma.
- The division will promote examples of success in this arena by under-represented groups.