

## **Strategic Research Plan for Idaho Higher Education (2016-2020)**

Research is being increasingly acknowledged by industry, government and education as a key factor in the future economic vitality of Idaho. The universities and colleges of Idaho's system of higher education understand the need for greater collaboration in order to be competitive in today's global environment. Recognizing the need to focus on and emphasize existing strengths and opportunities in Idaho's research community, the vice presidents of research and economic development developed the following statewide strategic plan for research to ensure the greatest potential for achieving a vital and sustainable research base for Idaho. The strategic plan identifies the key research areas that will become the focal points for research and economic development through partnering among academia, industry and government in science, technology, and creative activity.

Research is fundamental to the mission of a university due to its role in knowledge discovery and in providing new ideas for technology commercialization via patents, copyright, licenses and startup companies. University faculty who engage in research and creative activity are at the leading edge of their respective fields. Research also enhances the national reputation of the faculty and the universities. These faculty and their vibrant research programs attract the best graduate and undergraduate students by providing unique cutting-edge learning experiences in their research laboratories, studios, field sites and classrooms. On the most basic level, research strengthens a university's primary product — innovative, well-educated students ready to enter a competitive workforce.

Research is the foundation of a university's economic development role. The influx of research dollars from external grants and contracts creates new jobs at the university, along with the attendant purchases of supplies, services, materials and equipment. The results of the research are new knowledge, new ideas, and new processes, which lead to patents, startup companies, more efficient businesses as well as a highly trained workforce prepared to tackle 21st century challenges.

Idaho's research universities have strengths and opportunities for economic development in 1) Energy, 2) Natural Resource Utilization and Conservation, 3) Biosciences, 4) Novel Materials and 5) Software Engineering.

By focusing collaborative efforts in these areas, the research universities will expand research success by:

- Helping Idaho institutions focus on their research strengths;
- Creating research and development opportunities that build relationships between universities and the private sector;
- Contributing to the economic development of the State of Idaho;
- Enhancing learning and professional development through research and scholarly activity; and

- Building and improving the research infrastructure of Idaho universities to meet current and future research needs.

This statewide Strategic Research Plan for Idaho Higher Education is a tool for identifying and attaining quantifiable goals for research and economic growth and success in Idaho. The plan will be reviewed and updated annually as needed amid the fast-changing pace of research discovery.

## **VISION**

Idaho's public universities will be a catalyst and engine to spur creation of new knowledge, technologies, products and industries that lead to advances and opportunities for economic growth and enhance the quality of life in Idaho and the nation.

## **MISSION**

The research mission for Idaho's universities is to develop a sustainable resource base by:

- Identifying, recruiting and retaining top faculty with expertise in key research areas;
- Building research infrastructure including facilities, instrumentation, connectivity and database systems to support an expanding statewide and national research platform;
- Attracting top-tier students to Idaho universities at the undergraduate and graduate levels and providing outstanding education and research opportunities that will prepare them to excel in future careers;
- Raising awareness among state, national and international constituencies about the research excellence and capabilities of Idaho's universities by developing and implementing targeted outreach, programs and policies; and
- Collaborating with external public, private, state and national entities to further the shared research agenda for the state, thereby promoting economic and workforce development and addressing the needs and challenges of the state, region and nation.

## **GOALS AND OBJECTIVES**

**Goal 1: Increase research at, and collaboration among, Idaho universities and colleges to advance areas of research strength and opportunity.**

*Objective 1.A: Ensure growth and sustainability of public university research efforts.*

Performance Measure 1.A.1: Statewide amount of total annual research and development expenditures as reported in the National Science Foundation

(NSF) Higher Education Research and Development Survey. Benchmark: 10% increase per year.

*Objective 1.B: Ensure the growth and sustainability of the existing collaborative research at the Center for Advanced Energy Studies (CAES).*

Performance Measure 1.B.1: Statewide amount of U.S. Department of Energy (DOE) research and development expenditures as reported in the National Science Foundation (NSF) Higher Education Research and Development Survey. Benchmark: 10% increase per year.

*Objective 1.C: Expand joint research ventures among the state universities.*

Performance Measure 1.C.1: Number of new fully sponsored project proposals submitted by an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction). Benchmark: 50% increase per year.

Performance Measure 1.C.2: Number of new fully sponsored project awards to an Idaho University that involve a subaward with another Idaho institution of higher education (in either direction). Benchmark: 30% increase per year.

**Goal 2: Create research and development opportunities that strengthen the relationship between state universities and the private sector.**

*Objective 2.A: Increase the number of sponsored projects involving the private sector.*

Performance Measure 2.A.1: Number of new sponsored projects involving the private sector. Benchmark: 50% increase per year.

**Goal 3: Contribute to the economic development of the State of Idaho.**

*Objective 3.A: Increase the amount of university-generated intellectual property introduced into the marketplace.*

Performance Measure 3.A.1: Number of technology transfer agreements (as defined by AUTM [Association of University Technology Managers]). Benchmark: 15% increase per year.

Performance Measure 3.A.2: Number of invention disclosures (including plant varieties). Benchmark: 1 for every \$2M of research expenditures.

Performance Measure: 3.A.3: Amount of licensing revenues. Benchmark: 10% increase per year.

*Objective 3.B: Increase the number of university startup companies (include startups outside of Idaho).*

Performance Measure 3.B.1: Number of startup companies. Benchmark: 10% increase per year.

**Goal 4: Enhance learning and professional development through research and scholarly activity.**

*Objective 4.A: Increase the number of university and college students and staff involved in sponsored project activities.*

Performance Measure 4.A.1: Number of undergraduate and graduate students paid from sponsored projects. Benchmark: 20% increase per year.

Performance Measure 4.A.2: Percentage of baccalaureate students who graduated in STEM disciplines and had a research experience. Benchmark: 20% increase per year.

Performance Measure 4.A.3: Number of faculty and staff paid from sponsored projects. Benchmark: 20% increase per year.