Guest column: Purdue increases research revenues for state

By RICHARD O. BUCKIUS • For the Journal & Courier • March 2, 2010

As anyone who has ever tried to live on a budget knows, you can manage it two ways: reduce expenses and/or increase income.

While Indiana's colleges and universities cut budgets in light of state revenue shortfalls, we also need to look for ways to increase income. For Indiana's major research universities, one way is by increasing research grants.

Although competition for funding is intense, the payoff for Indiana is significant. Purdue already has doubled its research funding since 2000 and now is laying the groundwork to expand it again. Purdue's strategic plan has the goal to reach $600 million by 2014. In addition to bringing in revenue for the university, for every $1 million in expenditures related to research awards, Purdue historically supports six or seven full-time equivalent employees.

The more funding Purdue's scholars bring in, the more we are able to draw top faculty researchers to Purdue, whose bright ideas, in turn, garner more research funding.

How can we set ourselves up to attract research funding? If you look at Purdue's strengths, at funding opportunities and at the global challenges facing our region, state and nation, the path is relatively clear.

First, we need to consider what research is being funded by government agencies and external sources and match Purdue's strengths with those opportunities. Currently, we are emphasizing our research activities in the following areas, which also align with federal funding initiatives such as:

- Cyber and information technology
- Energy, the environment and sustainability
- Life and health sciences
- Security, defense and space sciences

STEM disciplines: science, technology, engineering and mathematics education. To increase our competitiveness in both research and learning, we have realigned our existing academic areas in the health sciences to create a new College of Health and Human Sciences. This realignment will bring together health sciences that include disciplines such as foods and nutrition, health and kinesiology, health science, psychology, audiology and speech sciences, nursing and more.

The new organizational structure will promote new collaborations like others at Purdue, a second advantage in garnering large interdisciplinary grants.

While individual disciplines are the foundation of a university, bringing together multiple disciplines is required to solve many of the complex problems underlying today's global issues. Consequently, when we apply for research grants, we need to demonstrate our ability to ensure such collaborations. Our researchers need to pool together talents from various disciplines of the university -- and from other universities -- to form a team with a broad range of expertise capable of tackling the grand challenges.

To foster such ventures, Purdue works closely with many of Indiana's other great institutions of higher education. Additionally, Purdue’s Discovery Park -- celebrating its ninth anniversary -- provides the research facilities and specialized laboratory environment that is essential for research and development.

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equipment to bring these researchers together to
tackle those complex challenges.

Third, we often need a learning component to land
the large awards. How will we involve
undergraduate students? How will we inspire
students in K-12 to follow careers in science,
technology, engineering and mathematics
disciplines, known as STEM?

To facilitate this, Purdue created the Discovery
Learning Research Center -- creating a center to
advance research that revolutionizes learning in the
STEM disciplines.

The center's facilities feature unique, flexible spaces
designed for educational research unlike any
available nationwide. The spaces also incorporate
technologies and structural features that allow for
collection of research data about the learning
experience. A strong foundation in the STEM
disciplines is critical to the success of the next
generation of leaders.

Fourth, we need a pathway to bring discoveries to
market. This is accomplished in two ways: through
our entrepreneurship programs and our technology
parks.

Companies in the Purdue Research Parks and its
technology centers along the Interstate 65 corridor
now employ 3,700 people and provide the support
to help new ventures succeed and grow. They
represent a $200 million investment Purdue has
made in Indiana.

Normalizing our commercialization activity relative
to our total research expenditures during 2007-
2008, Purdue ranked first in the Big Ten in
invention disclosures, new patent applications and
license and option agreements. These efforts also
created a dozen new companies for Indiana.

Expanding our research base creates jobs, Indiana
knowledge-based businesses and world-class
graduates. It’s smart business for Indiana.

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