

# Centers of Excellence Status Update

October 29, 2007

## Background

Centers of Excellence started as a concept in North Dakota with direct appropriations to specific Centers in 2003. This included funding for the UND Center for Innovation, the NDSU Center for Technology Enterprise, and the NDSU Beef Systems Center of Excellence.

In 2005, the Governor proposed, and the legislature authorized, a \$50 million Centers of Excellence program. The first installment of \$20 million was appropriated for the 2005-2007 biennium and an approval process and criteria were put in place for these funds to be awarded on a competitive basis. During the 2005-2007 biennium eleven projects were approved and awarded funding.

In 2007, a second installment of up to \$20 million was appropriated by the legislature, with \$10 million available for a round of funding in 2007. Also during the 2007 legislative session, the Centers of Excellence Commission, along with the Department of Commerce, requested that changes be made to the COE statute to require monitoring and follow-up of funded Centers. The legislature gave Commerce the responsibility to assist the Commission in monitoring the Centers and the Commerce is currently putting into place the necessary tools to make this happen.

## Current Status of Centers

This section contains information and brief highlights of the current status of three Centers funded in 2003 and the eleven Centers awarded funding during the 2005-2007 biennium. Much of this information was gathered informally through conversations with people associated with the Centers. A formal annual report will be received from the eleven Centers funded through the competitive Centers of Excellence program by the end of the year and a summary report will be made available in early 2008.

### Center for Innovation

The UND Center for Innovation received \$800,000 to build a new business incubator building, called the Ina Mae Rude Entrepreneur Center. This Center is currently incubating 22 businesses, having already incubated an additional 20 businesses. The Center for Innovation has been designated as one of only eight Soft Landings International Incubators. Also, UND ranks ninth in the nation in undergraduate entrepreneurship programs by Entrepreneur Magazine and the Princeton Review. The addition of the Ina Mae Rude Entrepreneur Center added 70 employees, bring the total to 130 of employees at the Center for Innovation and the businesses being incubated.

### Center for Technology Enterprise

The NDSU Research and Technology Park received \$1,250,000 to use toward the Center for Technology Enterprise, a technology incubator. This \$1.25 million was

combined with \$1.75 million from the U.S. Department of Commerce's Economic Development Administration and over \$4 million in privately raised funds. The Technology Incubator opened in March, 2007 and held a ribbon cutting on October 23, 2007. It houses two anchor tenants, Bobcat and Feed Management Systems, as well as Appareo Systems, Pedigree Technologies, Precision Partners, Appolis Mobil Business Solutions, and Intelligent InSites. It currently has 77 employees.

#### Beef Systems Center of Excellence

The NDSU Beef Systems Center of Excellence received \$800,000 which is being leveraged with other funds to construct a new \$3 million beef processing and research center. A groundbreaking for this Center was conducted in August, 2007. NDSU is partnering with North Dakota Natural Beef to promote beef that does not contain antibiotics or growth hormones.

#### National Energy Center of Excellence

The Bismarck State College National Energy Center of Excellence will be a world-class facility that combines energy workforce training with environmental research while advancing the use of coal combustion products. This Center was awarded \$3 million, which has been leveraged with over \$8 million in match. The National Energy Center of Excellence is currently under construction and is expected to be completed in summer of 2008. The energy industry anticipates 3,350 new construction jobs and 728 new, permanent technician jobs will be created as a result of new plants being constructed.

#### Center of Excellence for Advanced Electronics Design and Manufacturing

North Dakota State University's Center of Excellence for Advanced Electronics Design and Manufacturing conducts research on highly-marketable electronics products identified by private sector partners. It was awarded \$3 million in February, 2006 and has lead to 4 additional research scientist and engineering jobs at the Center, with private sector jobs to follow upon successful completion of research and development.

#### National Center for Hydrogen Technology

UND Energy and Environmental Research Center's National Center for Hydrogen Technology received \$2,500,000 towards the construction of a 15,000-square-foot facility to enhance the strategic research, development, testing, and commercialization of hydrogen and fuel cell technologies. The facility was recently completed and now employs 20 people averaging \$61,000 per year. Pratt Whitney Rocketdyne, a private sector partner, is in the process of locating staff in the facility.

#### The Dakota Center for Technology Optimized Agriculture

Lake Region State College's Dakota Center for Technology Optimized Agriculture received \$450,000 in February, 2006. This Center's mission is to birth technology-optimized products which increase net margins of North Dakota's farmers and ranchers, respond to the need for technological inputs which preserve fragile eco-systems, and create an entrepreneurial platform. It has lead to increased jobs at Agri ImaGIS Technologies (3), TotalCrop Farming Systems (1), and Verdi-Plus (1).

#### Agbiotechnology: Oilseed Development

The North Dakota State University Center of Excellence for Agbiotechnology: Oilseed Development will research and make available conventional and/or deregulated biotechnology lines of canola with unique oilseed traits that have potential of biofuels. This Center has received \$2 million in May, 2006 and is partnering with Monsanto and ADM. ADM recently opened an 85 million gallon biodiesel plant which added 65 employees to its existing 20 employees working at the canola crushing plant. Growers who benefit from increased yields, reduced risks, and greater profits could realize increased wealth of \$20-66 million per year.

#### Center for Surface Protection

North Dakota State University's Center for Surface Protection performs market-driven research and development of surface protecting coatings that will enhance the durability of manufactured products and address industrial problems for companies located in North Dakota and elsewhere. The Center for Surface Protection received \$2 million in May, 2006. This Center has added scientist and engineering jobs, lead to the creation of additional employment at Gremada Industries, and allowed Marvin Windows and Doors to retain employees while most of the industry is laying off employees.

#### Center of Excellence in Life Sciences and Advanced Technologies

University of North Dakota's Center of Excellence in Life Sciences and Advanced Technologies (COELSAT) will be a 50,000 sq ft state-of-the-art secured facility that includes 34,000 sq ft of laboratories and 16,000 sq ft of office space. This Center was awarded \$3.5 million. Currently under construction, it is expected to be completed in late spring or early summer 2008. It will house six companies and is expected to create over 100 high-value jobs within 5 years.

#### Unmanned Aircraft Systems (UAS) Center of Excellence for Economic Development

University of North Dakota's UAS Center of Excellence was awarded \$1 million in May, 2006. This Center provides 1) human factors flight performance research on UAVs and simulation applications; 2) research and development of UAV payload sensors and ground-based cockpits; and 3) education and training development for the integration of UAVs into the civilian aviation industry. It already surpassed its job projections and employs 23 people, has 15 student positions, and has lead to the creation of 15 jobs with Laserlith Corporation with the possibility of more.

#### Institute for Customized Business Solutions

Valley City State University's Institute for Customized Business Solutions produces industry-ready enterprise software consultants for jobs in North Dakota. It has created 51 jobs at an average salary of \$43,000.

#### Petroleum Safety and Technology Center

The Williston State College Petroleum Safety and Technology Center offers hands-on work over rig safety training. It will co-develop and apply new oilfield technologies to meet the critical workforce and technological needs of the oil and gas industry. Its first class starts October 29. It was awarded \$400,000 in Centers of Excellence funds.

Strom Center for Entrepreneurship and Innovation – Institute for Technology and Enterprise Development

The Strom Center for Entrepreneurship and Innovation – Institute for Technology and Enterprise Development at Dickinson State University is partnering with Killdeer Mountain Manufacturing to identify issues and develop solutions involving supply chain transparency, employee communication and advanced manufacturing technology. This Center was awarded \$1.15 million in October, 2006. Killdeer Mountain Manufacturing recently opened a plant in Dickinson that now employs over 100 people.

### **Current Round of Funding**

The Budget Section will be meeting on Tuesday, October 30 to act on six proposals that have been recommended for funding by the Centers of Excellence Commission. The Commission's recommendation has been approved by the North Dakota Economic Development Foundation and the State Board of Higher Education. The Emergency Commission has also reviewed the proposals and has recommended that the Budget Section approve them.

The six proposals include:

- **NDSU – Center of Excellence for Agbiotechnology: Oilseed Development II**
  - *Amount Recommended: \$1,500,000*
- **NDSU – Center for Surface Protection**
  - *Amount Recommended: \$2,000,000*
- **UND – Center of Excellence for Biomedical Device Research, Development & Commercialization**
  - *Amount Recommended: \$2,500,000*
- **UND – Unmanned Aircraft System Center of Excellence for Economic Development**
  - *Amount Recommended: \$1,500,000*
- **Lake Region State College – The Dakota Center for Technology-Optimized Agriculture (DCTOA) – Fusing Technology to Agronomic Needs of North Dakota Livestock Growers**
  - *Amount Recommended: \$400,000*
- **Minot State University – Great Plains Knowledge and Data Center**
  - *Amount Recommended: \$2,100,000*

### **Conclusion**

Although relatively young, the Centers of Excellence program has shown some initial success in engaging the private sector with our colleges and universities. The real results will be longer term and will occur after the research is completed and products and services commercialized.