

## SUMMARY OF 2009-11 CENTERS OF EXCELLENCE APPLICATIONS - ROUND 1

### HISTORY, AUTHORIZATION, AND FUNDING

The 2005 Legislative Assembly approved Senate Bill No. 2032 establishing a centers of excellence program. The Centers of Excellence Commission created by the bill is responsible for the application process and for making funding award recommendations for commission-approved applications for centers of excellence. The applications that are being submitted have been approved by the Centers of Excellence Commission, the North Dakota Economic Development Foundation, and the State Board of Higher Education.

The following is a summary of funds appropriated by the Legislative Assembly for centers of excellence grants for the 2005-07 through 2009-11 bienniums:

| <b>Appropriations for Centers of Excellence</b> |                          |                           |                             |
|---|--------------------------|---------------------------|-----------------------------|
|   | <b>General Fund</b>      | <b>Special Funds</b>      | <b>Total</b>                |
| 2005-07 legislative appropriation               |                          | \$20,000,000 <sup>1</sup> | \$20,000,000 <sup>1</sup>   |
| 2005-07 deficiency appropriation                |                          | 1,300,000 <sup>2</sup>    | 1,300,000 <sup>2</sup>      |
| 2007-09 legislative appropriation               |                          | 15,000,000 <sup>3</sup>   | 15,000,000 <sup>3</sup>     |
| 2007-09 deficiency appropriation                | \$4,450,000 <sup>4</sup> |                           | 4,450,000 <sup>4</sup>      |
| 2009-11 legislative appropriation               | 15,000,000 <sup>5</sup>  | 5,000,000 <sup>5</sup>    | 20,000,000 <sup>5,6,7</sup> |
| <b>Total</b>                                    | <b>\$19,450,000</b>      | <b>\$41,300,000</b>       | <b>\$60,750,000</b>         |

<sup>1</sup>The 2005 Legislative Assembly authorized the Office of Management and Budget (OMB) to borrow up to \$15 million from the Bank of North Dakota and to distribute the funds to the centers of excellence as directed by the Centers of Excellence Commission for the 2005-07 biennium. The 2005 Legislative Assembly also authorized OMB to borrow up to an additional \$5 million from the Bank to be used for centers of excellence grants, subject to Emergency Commission and Budget Section approval, if the \$15 million was not adequate. Section 14 of 2005 Senate Bill No. 2018 provided legislative intent that the Legislative Assembly intends to provide a total of \$50 million for centers of excellence during the 2005-07 biennium and future bienniums.

<sup>2</sup>The 2005 Legislative Assembly provided funding of \$16 million from the permanent oil tax trust fund to OMB for repaying the Bank for loans and accrued interest relating to funds borrowed for centers of excellence grants during the 2005-07 biennium. The 2007 Legislative Assembly appropriated an additional \$5.3 million from the permanent oil tax trust fund to OMB for repaying the remainder of the Bank loan and accrued interest relating to funds borrowed during the 2005-07 biennium for centers of excellence. The amount reported above represents funding for accrued interest of \$1.3 million on the loan.

<sup>3</sup>The 2007 Legislative Assembly appropriated \$15 million from the permanent oil tax trust fund to OMB for centers of excellence grants and authorized OMB, as directed by the Centers of Excellence Commission with Emergency Commission and Budget Section approval, to borrow up to \$5 million from the Bank for providing additional funding for centers of excellence if the \$15 million appropriated from the permanent oil tax trust fund is committed. Although the commission awarded more than \$15 million in grants during the 2007-09 biennium, OMB did not borrow funds from the Bank (see footnote No. 4).

<sup>4</sup>The 2009 Legislative Assembly in House Bill No. 1015 provided \$4,450,000 from the general fund for transfer to the centers of excellence fund for 2007-09 centers of excellence-awarded projects in excess of the \$15 million appropriated from the permanent oil tax trust fund by the 2007 Legislative Assembly.

<sup>5</sup>The 2009 Legislative Assembly appropriated \$15 million from the general fund and a contingent general fund appropriation of \$5 million for transfer to the centers of excellence fund for providing funding to centers of excellence for the 2009-11 biennium. The Office of Management and Budget was permitted to transfer the contingent appropriation if actual general fund revenues for the period July 1, 2009, through December 1, 2009, exceeded estimated general fund revenues for that period by at least \$5 million. Revenues were determined sufficient by OMB and the transfer was made in December 2009.

<sup>6</sup>Of the \$20 million the 2009 Legislative Assembly appropriated for centers of excellence, Section 23 of 2009 Senate Bill No. 2018 requires \$10 million be made available for centers of excellence enhancement grants during the biennium beginning July 1, 2009, and ending June 30, 2011. Through April 2010, the Centers of Excellence Commission has awarded \$7.75 million of the \$10 million appropriated for centers of excellence enhancement grants to the following projects:

|   |                    |
|---|--------------------|
| University of North Dakota<br>Center of Excellence for Unmanned Aircraft Systems Research,<br>Education, and Training | \$2,754,000        |
| North Dakota State University (NDSU)<br>Research 1 expansion  | 4,000,000          |
| Materials and Nanotechnology Center   | 1,000,000          |
| <b>Total</b>  | <b>\$7,754,000</b> |

<sup>7</sup>The 2009 Legislative Assembly established a centers of excellence fund in Senate Bill No. 2018 (North Dakota Century Code Section 15-69-06). Money in the fund is appropriated to the Department of Commerce on a continuing basis for implementing and administering the centers of excellence program. Interest earned on money in the fund is to be credited to the fund.

### 2005-07 APPROVED APPLICATIONS

During the 2005-07 biennium, the Budget Section approved the following centers of excellence grants:

|                              |   |              |
|------------------------------|---|--------------|
| <b>Round 1</b>               |   |              |
| Bismarck State College       | National Energy Center of Excellence  | \$3,000,000  |
| Lake Region State College    | Dakota Center for Technology-Optimized Agriculture                              | 450,000      |
| University of North Dakota   | National Center for Hydrogen Technology   | 2,500,000    |
| NDSU                         | National Center of Excellence for Advanced Electronics Design and Manufacturing | 3,000,000    |
| Total - Round 1              |   | \$8,950,000  |
| <b>Round 2</b>               |   |              |
| Williston State College      | Petroleum Safety and Technology Center  | \$400,000    |
| University of North Dakota   | Center of Excellence for Unmanned Aerial Vehicle and Simulation Applications    | 1,000,000    |
| University of North Dakota   | Center of Excellence in Life Sciences and Advanced Technology                   | 3,500,000    |
| NDSU                         | Center for Agbiotechnology: Oilseed Development                                 | 2,000,000    |
| NDSU                         | Center of Excellence for Surface Protection                                     | 2,000,000    |
| Valley City State University | Enterprise Application Model  | 1,000,000    |
| Total - Round 2              |   | \$9,900,000  |
| <b>Round 3</b>               |   |              |
| Dickinson State University   | Center for Entrepreneurship and Rural Revitalization                            | \$1,150,000  |
| Total - 2005-07 biennium     |   | \$20,000,000 |

### 2007-09 APPROVED APPLICATIONS

In October 2007, the Budget Section gave final approval to six centers of excellence applications submitted by the Centers of Excellence Commission from Round 1. In September 2008, the Budget Section gave final approval to seven centers of excellence applications submitted by the Centers of Excellence Commission from Round 2 of the application process for the 2007-09 biennium.

|                            |  |                           |
|----------------------------|--|---------------------------|
| <b>Round 1</b>             |  |                           |
| NDSU                       | Center for Agbiotechnology: Oilseed Development II   | \$1,500,000               |
| NDSU                       | Center of Excellence for Surface Protection  | 2,000,000                 |
| University of North Dakota | Biomedical Device Research, Development, and Commercialization                                     | 2,500,000 <sup>1</sup>    |
| University of North Dakota | Unmanned Aircraft Systems  | 1,500,000                 |
| Lake Region State College  | Dakota Center for Technology-Optimized Agriculture   | 400,000                   |
| Minot State University     | Great Plains Knowledge and Data Center   | 2,100,000 <sup>1</sup>    |
| Total - Round 1            |  | \$10,000,000 <sup>1</sup> |
| <b>Round 2</b>             |  |                           |
| NDSU                       | Center for Integrated Electronic Systems   | \$2,050,000               |
| NDSU                       | Center for Biopharmaceutical Research and Production   | 2,000,000                 |
| University of North Dakota | Passive Therapeutics   | 2,650,000                 |
| University of North Dakota | SUNRISE BioProducts: A Center of Excellence for Chemicals, Polymers, and Composites From Crop Oils | 2,950,000                 |
| University of North Dakota | Petroleum Research, Education, and Entrepreneurship Center of Excellence                           | 3,000,000                 |

|  |  |                            |
|--|--|----------------------------|
| University of North Dakota                 | Center of Excellence in Space Technology and Operations        | 1,000,000                  |
| Minot State University                     | Entrepreneurial Center for Horticulture - Bottineau            | 400,000                    |
| Total - Round 2                            |  | \$14,050,000               |
| Subtotal 2007-09 approved applications     |  | \$24,050,000               |
| <b>Discontinued Centers of Excellence</b>  |  |                            |
| University of North Dakota                 | Biomedical Device Research, Development, and Commercialization | (2,500,000) <sup>1</sup>   |
| Minot State University                     | Great Plains Knowledge and Data Center                         | (2,100,000) <sup>1</sup>   |
| Total - Discontinued Centers of Excellence |  | (\$4,600,000) <sup>1</sup> |
| Total - 2007-09 biennium                   |  | \$19,450,000               |

<sup>1</sup>The University of North Dakota discontinued its Biomedical Device Research, Development, and Commercialization Center of Excellence due to being unable to raise the level of match required, and Minot State University discontinued its Great Plains Knowledge and Data Center Center of Excellence due to problems with the transfer of data equipment from the university to a private sector partner. As a result, the Centers of Excellence Commission did not distribute the \$4.6 million awarded to these centers.

### 2009-11 APPLICATIONS PENDING APPROVAL - ROUND 1

The Budget Section is being asked to consider the following four centers of excellence applications submitted by the Centers of Excellence Commission from Round 1 of the application process during the 2010-11 biennium:

|                        |   |             |
|------------------------|---|-------------|
| NDSU                   | Center for Sensors, Communications and Control (CSCC)                     | \$2,800,000 |
| NDSU                   | Center for Advanced Technology Development and Commercialization (CATCOM) | 3,900,000   |
| Minot State University | Geriatric Research Center   | 500,000     |
| Total                  |   | \$7,200,000 |

### 2009-11 APPLICATION SUMMARIES - ROUND 1

The schedule below summarizes the statutory **requirements and other considerations** contained in Chapter 15-69 related to centers of excellence as well as additional information requested by the Emergency Commission in prior rounds of application reviews. Upon approval of the application by the Centers of Excellence Commission, the State Board of Higher Education, North Dakota Economic Development Foundation, and **Budget Section (after a recommendation by the Emergency Commission)**, an entity may be provided a funding award and be designated as a "center of excellence."

The Budget Section is being asked to consider the following four centers of excellence applications totaling \$7.2 million for Round 1 of the 2009-11 biennium application process. Of the \$20 million appropriated by the 2009 Legislative Assembly for centers of excellence, Section 23 of 2009 Senate Bill No. 2018 requires \$10 million be used for centers of excellence enhancement grants. With this restriction, \$10 million of funding is available for Round 1 of the 2009-11 biennium application process.

The June 2010 centers of excellence applications approved by the Centers of Excellence Commission for Round 1 totaling \$7.2 million are listed below, along with the statutory provisions and summary information for each of the applications. If the \$7,200,000 is approved, \$2.8 million of the total \$10 million appropriated for centers of excellence grants for the 2009-11 biennium would remain unawarded.

| Description                                 | Project - Application Summary |                           |  |
|---|-------------------------------|---------------------------|--|
|   | 1742A<br>NDSU -<br>CSCC       | 1742B<br>NDSU -<br>CATCOM | 1742C<br>Minot State University -<br>Geriatric Research Center |
| Center of excellence funding request        | \$2,800,000                   | \$3,900,000               | \$500,000  |
| Proposed center of excellence funding award | \$2,800,000                   | \$3,900,000               | \$500,000  |

| Description  | Project - Application Summary   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
|--|---|--|--|-------------------------|-------------|------------|-----------|---------------|---------|-------|--------------------|---|---------------------|--|----------------------|-------------|------------|-----------|---------------|-----------|-------|--------------------|---|---------------------|--|----------------|-------------|------------|---|-------|--------------------|
| Emergency Commission Request No./Project   | 1742A<br>NDSU -<br>CSCC   | 1742B<br>NDSU -<br>CATCOM  | 1742C<br>Minot State University -<br>Geriatric Research Center   |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| <b>Requirements</b><br>A center must be an institution of higher education or a nonprofit university- or college-related foundation under the control of the State Board of Higher Education (Section 15-69-02(1)).  | NDSU  | NDSU   | Minot State University   |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| The institution or nonprofit foundation must be working in partnership with the private sector (Section 15-69-02(1)).  | SNAPS Holding Company<br>Pedigree Technologies<br>Intelligent InSites<br>PureChoice   | Triton Systems, Inc.   | Trinity Health   |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| A center shall use funds awarded under this chapter to enhance capacity and leverage state, federal, and private sources of funding. A center awarded funds under this chapter may not use the funds for infrastructure, to supplant funding for current operations or academic instructions, or to pay indirect costs (Section 15-69-05(1)).  | Funding will be used for salaries of engineering staff and the creation of systems in the areas of communications, control, and sensing. Business development activities will be included within project budgets. Sustaining activities will be pursued with both existing partners and new partners. CSCC expects hiring at NDSU to begin the program, hiring will complement existing staff. Some first-year expenditures will be made toward computer systems and office furniture for new employees at NDSU. After that, no furniture or computer expenditures are anticipated. | Funding will be utilized to apply NDSU's capabilities and expertise in advanced polymers and coatings, photovoltaics, flexible and printable electronic materials, design and microminiaturization of electronics, and prototype and scale-up manufacturing to assist private sector partners in establishing and growing their product development, testing, and manufacturing capabilities. Funding will be used for scientific and technical personnel salary and related costs, program and project administration, operating expenses, project-specific travel, equipment, chemicals, reagents, supplies, materials, and business development activities. | Funding will be used for salaries of a center director/office manager and administrative assistant, fringe staff, faculty release time, undergraduate student wages, graduate student wages, research project expenses (including equipment, rental expenses, supplies, travel and travel-related costs), office expenses, public information/marketing, and risk management fees. |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Total matching funds anticipated (\$2 of matching funds are required for each \$1 of state funds) (Section 15-69-05(3)).   | \$5,600,000   | \$7,800,000  | \$1,000,000  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| <b>Major considerations</b><br>In making funding recommendations and designation determinations, the commission, board, foundation, and Budget Section <b>shall give major consideration</b> to the portion of matching funds provided <b>in cash</b> by the <b>private sector</b> . Of the \$2 of matching funds, at least \$1 must be cash, of which at least 50 cents must be from the private sector (Section 15-69-05(3)).                                    | <table border="0" style="width: 100%;"> <tr> <td>Private sector cash</td> <td></td> </tr> <tr> <td>    Private sector partners</td> <td style="text-align: right;">\$2,800,000</td> </tr> <tr> <td>Other cash</td> <td style="text-align: right;">2,550,000</td> </tr> <tr> <td>In-kind asset</td> <td style="text-align: right;">250,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;"><u>\$5,600,000</u></td> </tr> </table>  | Private sector cash  |  | Private sector partners | \$2,800,000 | Other cash | 2,550,000 | In-kind asset | 250,000 | Total | <u>\$5,600,000</u> | <table border="0" style="width: 100%;"> <tr> <td>Private sector cash</td> <td></td> </tr> <tr> <td>    Triton Systems, Inc.</td> <td style="text-align: right;">\$1,950,000</td> </tr> <tr> <td>Other cash</td> <td style="text-align: right;">1,950,000</td> </tr> <tr> <td>In-kind asset</td> <td style="text-align: right;">3,900,000</td> </tr> <tr> <td>Total</td> <td style="text-align: right;"><u>\$7,800,000</u></td> </tr> </table> | Private sector cash |  | Triton Systems, Inc. | \$1,950,000 | Other cash | 1,950,000 | In-kind asset | 3,900,000 | Total | <u>\$7,800,000</u> | <table border="0" style="width: 100%;"> <tr> <td>Private sector cash</td> <td></td> </tr> <tr> <td>    Trinity Health</td> <td style="text-align: right;">\$1,000,000</td> </tr> <tr> <td>Other cash</td> <td style="text-align: right;">0</td> </tr> <tr> <td>Total</td> <td style="text-align: right;"><u>\$1,000,000</u></td> </tr> </table> | Private sector cash |  | Trinity Health | \$1,000,000 | Other cash | 0 | Total | <u>\$1,000,000</u> |
| Private sector cash  |   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Private sector partners  | \$2,800,000   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Other cash   | 2,550,000   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| In-kind asset  | 250,000   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Total  | <u>\$5,600,000</u>  |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Private sector cash  |   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Triton Systems, Inc.   | \$1,950,000   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Other cash   | 1,950,000   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| In-kind asset  | 3,900,000   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Total  | <u>\$7,800,000</u>  |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Private sector cash  |   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Trinity Health   | \$1,000,000   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Other cash   | 0   |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| Total  | <u>\$1,000,000</u>  |  |  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |
| <b>Other considerations</b><br>(Section 15-69-04(3))<br><br>In deciding whether to approve or disapprove an application, the commission <b>is to consider</b> whether the center will: <ul style="list-style-type: none"> <li>• <b>Use</b> university or college <b>research</b> to promote private sector <b>job growth</b> and expansion of knowledge-based industries or use university or college research to promote the development of <b>new</b></li> </ul> | New sensing, communications, and control products will be codeveloped with private sector partners. The NDSU faculty and engineering departments, along with the NDSU Center for Nanoscale Science and Engineering, will assist private sector partners in the area of sensing,   | The research, development, and commercialization efforts that will be conducted by CATCOM with its private sector partners will promote the development of new products through new high-tech companies that are also exploring options to establish commercial  | The center's activities will result in center-sponsored research projects that will guide Trinity Health in expanding its existing services and potentially adding new services benefiting the state and region's large and growing geriatric population. Trinity Health anticipates hiring new staff, increasing the number of  |                         |             |            |           |               |         |       |                    |   |                     |  |                      |             |            |           |               |           |       |                    |   |                     |  |                |             |            |   |       |                    |

| Description   | Project - Application Summary   |   |   |
|---|---|---|---|
| Emergency Commission Request No./Project  | 1742A<br>NDSU -<br>CSCC   | 1742B<br>NDSU -<br>CATCOM   | 1742C<br>Minot State University -<br>Geriatric Research Center  |
| <p><b>products, high-tech companies, or skilled jobs</b> in this state.</p> <ul style="list-style-type: none"> <li>• Create high-value private sector employment opportunities in this state.</li> <li>• Provide for public/private sector involvement and partnerships.</li> <li>• Leverage other funding, including cash from the private sector.</li> <li>• Increase research and development activities that may involve federal funding from the National Science Foundation Experimental Program to Stimulate Competitive Research (EPSCoR).</li> </ul> | <p>communications, and controls. Through its work, CSCC will promote private sector job growth, expansion of skilled jobs in existing North Dakota companies, and interest from out-of-state companies in North Dakota.</p> <p>72-80+</p> <p>CSCC private sector partners envision 72-80+ new jobs.</p> <p>CSCC's purpose is to build and enhance public-private sector partnerships. The proposed center will further enhance NDSU's reputation in this area based on past center performance and past federal government project performance.</p> <p>The NDSU Center for Nanoscale Science and Engineering will be positioned to address federal contracts by enhancing and creating certain areas of expertise in sensing, communications, and controls. NDSU has previously engaged with Pedigree Technologies on a Navy contract and has plans to do similar work engagements. NDSU has worked on both Small Business Innovation Research (SBIR) and Broad Agency Announcement (BAA) proposal work and plans to utilize such opportunities in the future.</p> <p>The presence of CSCC on the NDSU campus will benefit EPSCoR by bringing new expertise to campus that faculty can access in making their National Science Foundation proposals more competitive.</p> | <p>enterprises in North Dakota. CATCOM will help promote private sector job growth by attracting new companies to the state that are interested in using (via licenses) NDSU inventions, technologies, and other intellectual property or that of private sector partners to make products demanded by the markets.</p> <p>6+</p> <p>CATCOM expects to hire up to three scientists. The private sector partner has projected up to six new additional jobs.</p> <p>CATCOM's intent is to build and enhance public-private sector partnerships that will advance the inventions, technologies, and other intellectual property of NDSU and/or private sector partners from "bench to market," to help the private sector better commercialize inventions and technologies in the form of new high-value products. CATCOM will further enhance NDSU's reputation as a valued participant in private-public partnerships involving the private sector, federal and state governments, and universities.</p> <p>NDSU CATCOM will be positioned to procure competitive grants and contracts from the federal government and contracts from other private sector partners by enhancing and creating commercially driven capabilities and expertise in advanced technologies and manufacturing in such important areas as renewable energy and electronics. NDSU already has numerous grants and contracts from the Department of Defense, the Department of Energy, the National Institutes of Health, the National Science Foundation, PPG Industries, Caterpillar, Akzo-Nobel, Monsanto, and many other entities. CATCOM capabilities and expertise in advanced technologies will provide NDSU additional federal funding opportunities from federal agencies, companies, and other organizations.</p> <p>CATCOM will benefit the EPSCoR program at NDSU by bringing new expertise, experience, and other capabilities to various centers, units, and departments, including access to the high-level technical and business expertise and commercialization skills of its private sector partners. Many federal funding programs require the transition of discoveries and inventions to the private sector. CATCOM will make NDSU centers, units, and departments more competitive for funding through EPSCoR and other federal programs by providing opportunities to interact</p> | <p>jobs in the community and region while adding valuable services for an aging population.</p> <p>50-75</p> <p>With the center's research on how to improve geriatric wellness from almost all aspects of health and wellness, there is the probability of new high-value employment opportunities emerging.</p> <p>The outcomes and long-term role of the center are to discover and implement new and/or improved services and products based on research findings. Geriatric service providers in the area are excited about the potential of the center. Two of these organizations provided letters of support and have indicated a desire to participate in the research.</p> <p>Trinity Health's contribution will support research team expenses and provide access to facilities and advanced technology for use in research projects. Trinity Health also has many state-of-the-art facilities (including some of the most sophisticated medical equipment in the state) that along with the talents of its health and service professionals will add to the Minot State University faculty talents.</p> <p>Often grants to support research are from private foundations. A center of this type will enhance opportunities to garner some of those funds for use in North Dakota settings.</p> <p>The center will be eligible to seek funding from the Health Resources and Services Administration, National Institutes of Health, and the Centers for Disease Control and Prevention to support research projects. Many other local, state, and federal funding opportunities for geriatric-related research have also been identified.</p> |

| Description  | Project - Application Summary  |   |  |
|--|--|---|--|
| Emergency Commission Request No./Project   | 1742A<br>NDSU -<br>CSCC  | 1742B<br>NDSU -<br>CATCOM   | 1742C<br>Minot State University -<br>Geriatric Research Center   |
| <ul style="list-style-type: none"> <li>Foster and practice entrepreneurship.</li> <li>Promote the commercialization of new products and services in industry clusters.</li> <li>Become financially self-sustaining.</li> <li>Establish and meet a deadline for acquiring and expending all public and private funds specified in the application.</li> </ul> | <p>NDSU has working knowledge through some key personnel on how to engage with entrepreneurs, angel investors, venture capitalists, and the network of professionals which serve technology startups. NDSU currently works with the NDSU Technology Incubator, the Fargo RAIN Fund (local group of angel investors), InnovateND, and other startup assistance agencies. All the CSCC private sector partners are startups or emerging technology companies.</p> <p>CSCC is building on both computer-aided engineering design and manufacturing and CIES, and is focusing on product development in the core cluster areas of sensing, communications, and controls.</p> <p>The proposed center expects to be self-sustaining through continued engagement with the CSCC partners and through expansion with other private sector partners. By building core expertise, performing at a high level on all current projects and competing for new private and public sector work, the center expects to accomplish this. The center also plans to collect royalty revenue from developed intellectual property.</p> <p>The center plans to spend the funds over four years.</p> | <p>with the private sector in transitioning and commercializing discoveries and technologies.</p> <p>NDSU has working knowledge through some key personnel on how to engage with entrepreneurs, angel investors, venture capitalists, and the network of professionals which serve technology-based startup and spinoff companies. NDSU is currently involved with the NDSU RTP-Business Incubator, Fargo RAIN Fund (local group of angel investors), InnovateND, and other resources encouraging entrepreneurship in North Dakota.</p> <p>CATCOM will bridge laboratory discoveries to commercialized products in order to propel university technologies from "bench to market." CATCOM will initially focus on discoveries and technologies by NDSU that will encourage the growth and diversification of industry clusters in North Dakota, such as advanced manufacturing of (1) liquid silicon precursors for semiconductors, printable/flexible electronics, and photovoltaics/solar cells; and (2) functional (antimicrobial) coatings.</p> <p>CATCOM will be self-sustaining through continued engagement with other private sector partners who see value in CATCOM and NDSU research and development expertise and capabilities to advance or enhance its products, increase market share, and enhance competitiveness resulting in more revenue, reduced costs, and increased profits. CATCOM also expects to receive licensing fees and royalties when inventions, technologies, and other intellectual property are licensed to the private sector.</p> <p>The center plans to spend the funds over four years.</p> | <p>The center's activities will provide opportunities for entrepreneurial activity.</p> <p>Research and collaboration from the center will increase economic development in the creation of new services and products within several health care areas. Center research does not directly promote commercialization or development of new products, but it does promote the identification and development of new and/or improved services within health care that could have commercial interest.</p> <p>Local, state, federal, and foundation grant funding will be sought to finance continued center research. With center growth, a possible outcome may be a facility that offers limited patient services and services to other health care providers. Services provided would generate revenue and evolve from findings of the Geriatric Research Center projects.</p> <p>The center plans to spend the funds over four years.</p> |
| <p><b>Responses to previous Emergency Commission questions</b></p> <p>The potential new private sector jobs that will be created if the center of excellence proposal is funded, including the nature of the jobs and the number of new jobs</p>   | <p>Private sector partners have stated that they envision 72-80+ new high-paying engineering jobs in the sensing, communications, and control markets and the potential for 1,000 jobs in the category of call center workers and related workers. These jobs will be both entry-level and senior positions and also include software-related jobs, such as management, marketing, sales, and production. Private sector partners have a history of creating employment and economic development activity in North Dakota.</p>   | <p>CATCOM expects to hire up to three scientists for the EDCOE center. The private sector partner has projected up to six new high-paying jobs. Additional jobs will be created by other private sector partners that CATCOM and/or Triton Systems, Inc., will involve in center activities. These jobs comprise both entry-level and more senior engineering and scientific positions as well as those in management. New jobs and other economic development outcomes will result from CATCOM's collaborations with its private sector partners.</p>  | <p>The center projects a number of new jobs to be created both directly from research findings and from possible new services. Trinity Health anticipates hiring new staff, thus increasing the number of jobs in the community and region while adding valuable services for the aging population. Research and collaboration from this center will result in increased economic development in the creation of new jobs, new services, and new products within several health care areas.</p>  |

| Description   | Project - Application Summary   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
|---|---|----------------------------|--|-----------------------|-------------|-----------------------|---------|---------------------|---------|------------|----------------------|------------------------------|--|-----------------------|------------------------|-----------------------|---------|---------------------|---------|------------|----------------------|------------------------------|--|-----------------------|---------|----------------------|--------------------|--|---------------------|--|----------------------|--------------------------|------------------------------|--|----------------------|------------------------|------------------------------|--|----------------------|------------------------|----------------------|--------------------|--|---------------------|--|----------------|-------------|------------------------------|---|------------------------------|---|----------------------|--------------------|
|   | 1742A<br>NDSU -<br>CSCC   | 1742B<br>NDSU -<br>CATCOM  | 1742C<br>Minot State University -<br>Geriatric Research Center |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Details concerning the private sector match for each proposal, including description and value of any in-kind match | <table border="0"> <tr> <td>Private sector cash</td> <td></td> </tr> <tr> <td>SNAPS Holding Company</td> <td>\$1,350,000</td> </tr> <tr> <td>Pedigree Technologies</td> <td>500,000</td> </tr> <tr> <td>Intelligent InSites</td> <td>750,000</td> </tr> <tr> <td>PureChoice</td> <td>200,000 <sup>1</sup></td> </tr> <tr> <td>Private sector cash reserved</td> <td></td> </tr> <tr> <td>SNAPS Holding Company</td> <td>1,350,000 <sup>2</sup></td> </tr> <tr> <td>Pedigree Technologies</td> <td>250,000</td> </tr> <tr> <td>Intelligent InSites</td> <td>750,000</td> </tr> <tr> <td>PureChoice</td> <td>200,000 <sup>1</sup></td> </tr> <tr> <td>Private sector in-kind match</td> <td></td> </tr> <tr> <td>Pedigree Technologies</td> <td>250,000</td> </tr> <tr> <td>Total private sector</td> <td><u>\$5,600,000</u></td> </tr> </table> <p><sup>1</sup>Loan - Swiss Fiduciary and Trust.</p> <p><sup>2</sup>Company's current resources, personnel, and assets at work to continue to expand the software and electronics product lines.</p> | Private sector cash        |  | SNAPS Holding Company | \$1,350,000 | Pedigree Technologies | 500,000 | Intelligent InSites | 750,000 | PureChoice | 200,000 <sup>1</sup> | Private sector cash reserved |  | SNAPS Holding Company | 1,350,000 <sup>2</sup> | Pedigree Technologies | 250,000 | Intelligent InSites | 750,000 | PureChoice | 200,000 <sup>1</sup> | Private sector in-kind match |  | Pedigree Technologies | 250,000 | Total private sector | <u>\$5,600,000</u> | <table border="0"> <tr> <td>Private sector cash</td> <td></td> </tr> <tr> <td>Triton Systems, Inc.</td> <td>\$1,950,000 <sup>1</sup></td> </tr> <tr> <td>Private sector cash reserved</td> <td></td> </tr> <tr> <td>Triton Systems, Inc.</td> <td>1,950,000 <sup>2</sup></td> </tr> <tr> <td>Private sector in-kind match</td> <td></td> </tr> <tr> <td>Triton Systems, Inc.</td> <td>3,900,000 <sup>3</sup></td> </tr> <tr> <td>Total private sector</td> <td><u>\$7,800,000</u></td> </tr> </table> <p><sup>1</sup>Triton Systems, Inc., is committing \$150,000 per year of cash matching funds for a total of \$600,000. The remaining \$1.35 million in cash matching funds are contingent upon meeting technical milestones, market validation of the technology pursued, and identifying additional partners in year one. Identification of these additional partners will be aided by capability being established at Triton Fargo in June of 2010. One such partner will include a manufacturer of the Si6H12 raw material. Others will include participants in the photovoltaics, electronics, and energy storage markets.</p> <p><sup>2</sup>Private sector cash reserves are contingent on attaining relevant federal contracts. Triton Systems, Inc., has identified over \$75 million in contract opportunities at the Department of Energy and the Defense Advanced Research Projects Agency in solar energy, printable electronics, and energy storage that will be proposed over the next 6 months, and if successful, will be awarded within 12 months.</p> <p><sup>3</sup>In-kind assets include Triton Sytems, Inc., personnel that will be working on the projects as well as value of the equipment, chemicals, reagents, supplies, materials, syntheses, formulations, and other items needed for Triton Systems, Inc., to work on the project.</p> | Private sector cash |  | Triton Systems, Inc. | \$1,950,000 <sup>1</sup> | Private sector cash reserved |  | Triton Systems, Inc. | 1,950,000 <sup>2</sup> | Private sector in-kind match |  | Triton Systems, Inc. | 3,900,000 <sup>3</sup> | Total private sector | <u>\$7,800,000</u> | <table border="0"> <tr> <td>Private sector cash</td> <td></td> </tr> <tr> <td>Trinity Health</td> <td>\$1,000,000</td> </tr> <tr> <td>Private sector cash reserved</td> <td>0</td> </tr> <tr> <td>Private sector in-kind match</td> <td>0</td> </tr> <tr> <td>Total private sector</td> <td><u>\$1,000,000</u></td> </tr> </table> | Private sector cash |  | Trinity Health | \$1,000,000 | Private sector cash reserved | 0 | Private sector in-kind match | 0 | Total private sector | <u>\$1,000,000</u> |
| Private sector cash   |   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| SNAPS Holding Company   | \$1,350,000   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Pedigree Technologies   | 500,000   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Intelligent InSites   | 750,000   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| PureChoice  | 200,000 <sup>1</sup>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Private sector cash reserved  |   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| SNAPS Holding Company   | 1,350,000 <sup>2</sup>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Pedigree Technologies   | 250,000   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Intelligent InSites   | 750,000   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| PureChoice  | 200,000 <sup>1</sup>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Private sector in-kind match  |   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Pedigree Technologies   | 250,000   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Total private sector  | <u>\$5,600,000</u>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Private sector cash   |   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Triton Systems, Inc.  | \$1,950,000 <sup>1</sup>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Private sector cash reserved  |   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Triton Systems, Inc.  | 1,950,000 <sup>2</sup>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Private sector in-kind match  |   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Triton Systems, Inc.  | 3,900,000 <sup>3</sup>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Total private sector  | <u>\$7,800,000</u>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Private sector cash   |   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Trinity Health  | \$1,000,000   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Private sector cash reserved  | 0   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Private sector in-kind match  | 0   |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Total private sector  | <u>\$1,000,000</u>  |                            |  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| For the center's executive summary and budget detail see:   | <a href="#">Appendix A</a>  | <a href="#">Appendix B</a> | <a href="#">Appendix C</a>                                     |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |
| Emergency Commission Recommendation/vote  | Approve 4-2   | Approve 4-2                | Not approve 4-2  |                       |             |                       |         |                     |         |            |                      |                              |  |                       |                        |                       |         |                     |         |            |                      |                              |  |                       |         |                      |                    |  |                     |  |                      |                          |                              |  |                      |                        |                              |  |                      |                        |                      |                    |  |                     |  |                |             |                              |   |                              |   |                      |                    |

## APPROVAL PROCESS

In order to receive a funding award and be designated a center of excellence, each application must:

1. Be approved by the Centers of Excellence Commission - The commission may modify the application request (Section 15-69-02(1)).
2. Be approved by the North Dakota Economic Development Foundation (Section 15-69-02(2)).
3. Be approved by the State Board of Higher Education (Section 15-69-02(2)).
4. Be reviewed by the Emergency Commission. The Emergency Commission makes a recommendation on each application to the Budget Section (Section 15-69-02(2)).
5. Be considered by the Budget Section. The Budget Section, in considering each proposal, has the following options:
  - a. Approve the proposal.
  - b. Reject the proposal.
  - c. Rerefer the proposal to the Centers of Excellence Commission with recommended modifications.

If, upon receiving a rereferred recommendation, the commission modifies the recommendation or retains the recommendation and provides additional information within 30 days, the Emergency Commission may meet and either approve or reject the recommendation. If the Emergency Commission does not meet to consider the rereferred proposal within 30 days, the proposal will be considered at the next Budget Section meeting as modified or retained with additional information (Section 15-69-02(2)).

ATTACH:3