Prepared by the North Dakota Legislative Council staff for the Budget Section
September 2008

SUMMARY OF 2007-09 CENTERS OF EXCELLENCE APPLICATIONS - ROUND 2

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 to the Budget Section have been approved by the Centers of Excellence Commission, the North Dakota Economic Development Foundation, and the State Board of Higher Education and have been recommended for approval by the Emergency Commission.

The 2007 Legislative Assembly appropriated $15 million from the permanent oil tax trust fund to the Office of Management and Budget for centers of excellence grants and authorized the Office of Management and Budget, as directed by the Centers of Excellence Commission and with Emergency Commission and Budget Section approval, to borrow up to $5 million from the Bank of North Dakota for providing additional funding for centers of excellence, if the $15 million appropriated from the permanent oil tax trust fund is committed. Of the $15 million appropriation, up to $10 million was available at its first meeting after September 1, 2007, and up to $5 million and any unawarded funds remaining from the first-year $10 million allocation are available for Budget Section approval at its first meeting after September 1, 2008.

2005-07 APPROVED APPLICATIONS

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

Round 1		
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
North Dakota State University	National Center of Excellence for Advanced Electronics Design and Manufacturing	3,000,000
Total - Round 1		$8,950,000
Round 2		
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
North Dakota State University	Center for Agbiotechnology: Oilseed Development	2,000,000
North Dakota State University	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
Round 3		
Dickinson State University	Center for Entrepreneurship and Rural Revitalization	$1,150,000
Total - 2005-07 biennium		$20,000,000

2007-09 APPROVED APPLICATIONS - ROUND 1

In October 2007 the Budget Section gave final approval to the following six centers of excellence applications submitted by the Centers of Excellence Commission from Round 1 of the application process during the 2007-09 biennium:

North Dakota State University	Center for Agbiotechnology: Oilseed Development II	$1,500,000
North Dakota State University	Center of Excellence for Surface Protection	2,000,000
University of North Dakota	Biomedical Device Research, Development, and Commercialization	2,500,000[1]
University of North Dakota	Unmanned Aircraft System	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[1]
Total		$10,000,000[1]

[1]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 will not be distributing the $4.6 million awarded to these centers.

2007-09 APPLICATION SUMMARIES - ROUND 2

The schedule below summarizes the statutory **requirements and other considerations** contained in North Dakota Century Code (NDCC) Chapter 15-69 related to centers of excellence as well as additional information requested by the Emergency Commission in December 2005. 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 approved six center of excellence applications totaling $10 million from Round 1 of the 2007-09 biennium application process. Two of the centers of excellence have been discontinued, and as a result, the Centers of Excellence Commission will not be distributing $4.6 million of $10 million approved for centers of excellence. Therefore, $14.6 million of funding is available for Round 2 of the 2007-09 biennium application process.

The fall 2008 centers of excellence applications approved by the Centers of Excellence Commission for Round 2 totaling $14,050,000 are listed below, along with the statutory provisions and summary information for each of the applications. If the $14,050,000 is approved, considering the $5,400,000 approved from Round 1, $550,000 of the total $20 million appropriated for centers of excellence grants for the 2007-09 biennium would remain unawarded.

Description	**Project - Application Summary**						
Emergency Commission Request No./Project	**1669 North Dakota State University - Center for Integrated Electronic Systems**	**1670 North Dakota State University - Center for Biopharmaceutical Research and Production**	**1671 University of North Dakota - Passive Therapeutics**	**1672 University of North Dakota - SUNRISE BioProducts: A Center of Excellence for Chemicals, Polymers, and Composites From Crop Oils**	**1673 University of North Dakota - Petroleum Research, Education, and Entrepreneurship Center of Excellence**	**1674 University of North Dakota - Center of Excellence in Space Technology and Operations**	**1675 Minot State University - Bottineau - Entrepreneurial Center for Horticulture**
Center of excellence funding **request**	$2,050,000	$2,080,237	$2,650,000	$2,950,000	$3,000,000	$1,600,000	$400,000
Proposed center of excellence funding **award**	$2,050,000	$2,000,000	$2,650,000	$2,950,000	$3,000,000	$1,000,000	$400,000
Requirements 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 (NDCC Section 15-69-02(1)).	North Dakota State University	North Dakota State University	University of North Dakota Research Foundation	University of North Dakota	University of North Dakota	University of North Dakota	Minot State University - Bottineau
The institution or nonprofit foundation must be working in partnership with the private sector (NDCC Section 15-69-02(1)).	Bobcat Pedigree Technologies Intelligent InSites, Inc. Datacom International, Inc.	Aldevron Clinical Supplies Management Paraclin PRACS Institute, Ltd. MeritCare	Mayo Clinic Avianax Aldevron Schiltz Goose R&D Schiltz Goose Farms, North NovaDigm Therapeutic Cangene	SUNRISE Renewables Bayer CropScience Northwood Mills Kadrmas, Lee and Jackson Global Agricultural Solutions LM Glasfiber Integrity/Marvin Windows Tecton Products Composite Innovations PPG Industries Ashland Rohm and Haas	Schlumberger Information Solutions IHS, Inc. American Petroleum Institute Encore Acquisition Company Hess Corporation Marathon Oil Corporation St. Mary Land and Exploration Company Whiting Petroleum Corporation	GeoOptics LLC Broad Reach Engineering, Inc.	North Star Farms North Dakota Farmers Market and Growers Association
Designation (NDCC Section 15-69-02(1))	Commercialization	Commercialization	Commercialization and infrastructure	Commercialization	Infrastructure	Commercialization	Commercialization

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How future maintenance and operational costs of any new infrastructure will be provided (NDCC Section 15-69-02(1))	N/A	N/A	Funding for the center will be used to complete two additional BSL-3 suites and two additional BSL-2 research laboratories in the university's Center of Excellence in Life Sciences and Advanced Technologies. The laboratories will be leased when not being used by the center to fund operational costs.	N/A	No information provided	N/A	The center includes the building of new growing structures and the remodeling of the current greenhouse facility on campus. Future maintenance and operational costs will be covered by tuition revenue, workshop and conference fees, sales, research agreements, and future grants.
A center shall use funds awarded to enhance capacity, enhance infrastructure, and leverage state, federal, and private funds. A center may not use funds awarded to supplant funds for current operations or academic instruction or to pay indirect costs (NDCC Section 15-69-05(1)).	Funding will be used for technical personnel, program administration personnel, operating expenses, and system integration tools. The center will perform market-driven research and development projects involving systems integration of electronic hardware and software.	Funding will be used for salaries, supplies, operating expenses, and equipment to enable the center to perform research and development of biopharmaceuticals.	Funding will be used for research, including salaries for six to seven high-tech employees, materials, and equipment, and for computing facilities directly required for the development and commercialization of multiple passive therapeutic antibodies.	Funding will be invested in personnel, equipment, and materials that directly contribute to the development and commercialization of crop oil-derived chemicals, polymers, and composites.	The university has received $1 million from a university alumnus to build a petroleum engineering laboratory. The centers of excellence funding will be used for salaries, operating, and equipment costs associated with operating the laboratory and conducting related research.	Funding will be used for salaries, operating, and equipment costs for graduate students and faculty at the university to perform collaborative research with an aerospace company and for operations of the Agricultural Camera, a university-built sensor onboard the International Space Station.	Funding will be used for salaries, marketing, demonstration, distribution, and technology transfer costs associated with the center's activities.
Total matching funds anticipated ($2 of matching funds are required for each $1 of state funds) (NDCC Section 15-69-05(3)).	$4,100,000	$4,742,000	$8,398,637	$9,265,132	$7,958,374	$3,778,266	$890,418
Major considerations In making funding recommendations and designation determinations, the commission, board, foundation, and Budget Section **shall give major consideration** to the portion of matching funds provided **in cash** by the **private sector** (NDCC Section 15-69-05(3)).	Private sector cash $0 Other cash $0 Total cash $0	Private sector cash Aldevron $50,000 Other cash $0 Total cash $50,000	Private sector cash IntraGlobal Biologics $30,000 Other cash Federal funds $5,200,000 Total cash $5,230,000	Private sector cash Bayer CropScience $250,000 Other cash North Dakota Soybean Council $300,000 Federal funds $6,950,000 Total other cash $7,250,000 Total cash $7,500,000	Private sector cash University alumnus $1,000,000 Other cash $0 Total cash $1,000,000	Private sector cash GeoOptics $840,000 Other cash University of North Dakota $558,265 Total cash $1,398,265	Private sector cash $0 Other cash Bottineau EDC $36,000 CONAC 220,000 MAGIC Fund 50,000 Regional lending institutions 15,000 Federal funds 310,218 Total other cash $631,218 Total cash $631,218

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Other considerations (NDCC Section 15-69-04(3)) In deciding whether to approve or disapprove an application, the commission **is to consider** whether the center will:							
• **Use** university or college **research** to promote private sector **job growth** and expansion of knowledge-based industries or use university or college research to promote the development of **new products, high-tech companies**, or **skilled jobs** in this state.	The center's activities will result in the development of new integrated electronic systems products for private sector partners that will enable the partners to create high-technology jobs. Over time, the center will promote private sector job growth.	The center will: • Train the next generation of highly skilled and valued vaccinologists. • Develop, support, and create incentives for postdoctoral fellowships in basic and clinical vaccinology. • Provide an opportunity to expand the life sciences sector in the state and enhance the growth of the vaccine industry cluster in the region.	The center's activities will result in partnerships for pharmaceutical therapeutics research and development.	The center's activities will result in the invention and development of "green" industrial chemicals, polymers, and fiber composites from crop oils. Technologies developed will be licensed for commercialization by a private sector partner and further developed for commercial companies.	The center's activities will result in products, technologies, and services that will be available for commercialization.	The center's activities directly tie the university research to a private sector, knowledge-based industry new to the state.	The center will grow the value-added organic specialty vegetable industry in the state by using demonstration models, improved technologies, consumer research, and implementing a distribution system.
• Create high-value private sector employment opportunities in this state.	The center's private sector partners anticipate the creation of approximately 60 new jobs.	The center would result in the creation of 40 high-value, private sector jobs.	The center's goal is to create 20 new jobs in pharmaceutical therapeutics research and development in one year to two years and another 40 new jobs in marketing and production of new pharmaceutical therapeutics in three years to five years.	The center will create 50 direct private sector jobs, including engineers, accountants, plant operators, and craft personnel, and 540 indirect private sector jobs.	The center will secure and enhance job growth in the petroleum and services sectors currently being experienced by the state from the increased number of oil drilling rigs.	The center will create 25 private sector jobs, including programmers, system administrators, scientists, and managers by the end of 2013. An additional 15 jobs are anticipated to be added by 2016.	The center anticipates that 377 entrepreneurs will utilize the center within five years. The center anticipates that at least 150 producers will construct season extension facilities as a result of their involvement with the center. Of the 150, approximately 50 would be entry-level producers.
• Provide for public/private sector involvement and partnerships.	The center is predicated on public/private partnerships.	A number of public/private partnerships are identified.	A number of public/private partnerships are identified.	A number of public/private partnerships are identified.	The center's financially self-sustaining goal is dependent upon private sector partnerships.	A public/private partnership is identified.	A public/private partnership is identified.
• Leverage other funding	The center will be well-positioned to address future federal and private grants by creating certain areas of expertise in integrated electronic systems.	The center will leverage several areas of funding, including private sector funding and private and federal grant awards.	The center of excellence funding will leverage the funding obtained from the federal government and the private sector.	The center has opportunities to generate additional funding from a variety of sources.	The center of excellence funding will serve as seed money to enhance the capabilities of the research team to secure additional federal, state, and private funds.	Reference is made to the $3,778,266 total match referred to above.	Reference is made to the $890,418 total match referred to above.

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• Increase research and development activities that may involve federal funding from the National Science Foundation experimental program to stimulate competitive research.	The center will bring new expertise to the university that faculty would be able to collaborate with and potentially submit proposals for competitive funding.	The center will be able to use salaries, materials, and equipment as match for competitive grants and contracts.	No information provided	Obtaining this request increases research and development activities.	Some of the research planned by the center may be funded by the National Science Foundation and the Department of Energy.	The center and its private sector partners will collaborate on grant proposals to government agencies, foundations, and other sources, including the National Science Foundation.	The center is a viable candidate for grant opportunities with the National Science Foundation.
• Foster and practice entrepreneurship.	The center will engage with entrepreneurs, angel investors, and venture capitalists.	The center will help develop new startup companies that will utilize intellectual property developed by the center as the foundation for business models.	The center will provide specialized laboratories for pharmaceutical and life sciences entrepreneurs within the North Dakota University System to launch their research and development businesses.	The center will lead to investments in crop oil refinery plants.	The center's activities will provide opportunities for entrepreneurial activity.	The center's activities will provide opportunities for entrepreneurial activity.	The center is designed to support entrepreneurship in the organic and specialty vegetable industry by creating and providing value-added economically viable opportunities for businesses in the state.
• Promote the commercialization of new products and services in industry clusters.	The center is centrally focused on new products and services associated with the information and technology industry cluster.	The center will help generate or attract new businesses in biotechnology and biopharmaceuticals, stimulate private investment, and encourage the expansion and retention of existing companies.	The center will focus on developing a life sciences cluster for commercialization of infectious disease therapeutics.	The center will focus on commercialization of technologies that transform crop oils into biofuels, chemicals, and biopolymers.	The center will pursue the commercialization of the development of oilfield thermal energy.	At the core of the center is the creation of high-value private sector employment in the aerospace industry.	The center will develop and implement a distribution system, including direct marketing to grocery stores, restaurants, and institutions, as well as by establishing and delivering training for larger scale commercial distribution of North Dakota-grown vegetables and transplants.
• Become financially self-sustaining.	The center plans to become financially self-sustaining by receiving grants, contracts, and royalties and fees from the licensing of intellectual property.	The center plans to become financially self-sustaining due to its ability to generate and maintain multiple revenue streams from both public and private sectors.	The center plans to become financially self-sustaining as a result of laboratory leases, research funding, and revenue-generated by products.	The center will leverage funding awarded to develop major proposals and other funding sources to sustain the center. The center will also reinvest profits.	The center plans to become financially self-sustaining by receiving additional research funds and receiving funds for commercialization of products.	The center will receive increasing annual amounts of direct cash contributions from private sector partners. The center also anticipates receiving additional funding from federal research agencies.	The center plans to become financially self-sustaining within five years by generating revenues from training fees, cooperative distribution efforts, and the sale of produce. The center also anticipates pursuing additional public and private research funding.
• Establish and meet a deadline for acquiring and expending all public and private funds specified in the application.	The center plans to spend the funds over four years.	The center plans to spend the funds over three years.	The center plans to spend the funds over two years.	The center plans to spend the funds over three years.	The center plans to spend the funds over three years.	The center plans to spend the funds over five years.	The center plans to spend the funds over four years.

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Responses to previous Emergency Commission questions							
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.	The center's private sector partners anticipate the creation of approximately 60 new jobs. Most integrated electronic systems workers hold college degrees in engineering or computer science.	The center would result in the creation of 40 high-value, private sector jobs.	The center's goal is to create 20 new jobs in pharmaceutical therapeutics research and development in one year to two years and another 40 new jobs in marketing and production of new pharmaceutical therapeutics in three years to five years.	The center will create 50 direct private sector jobs, including engineers, accountants, plant operators, and craft personnel, and 540 indirect private sector jobs.	The center will secure and enhance job growth in the petroleum and services sectors currently being experienced by the state from the increased number of oil drilling rigs.	The center will create 25 private sector jobs, including programmers, system administrators, scientists, and managers by the end of 2013. An additional 15 jobs are anticipated to be added by 2016.	The center anticipates that 377 entrepreneurs will utilize the center within five years. The center anticipates that at least 150 producers will construct season extension facilities as a result of their involvement with the center. Of the 150, approximately 50 would be entry-level producers.
How any new building that is proposed with the use of the funds will be sustained from a financial standpoint, detailing the costs of sustaining the building and the source of revenue.	N/A	N/A	N/A	N/A	No information provided	N/A	Future maintenance and operational costs for new facilities will be covered by tuition revenue, workshop and conference fees, sales, research agreements, and future grants.
Details concerning the private sector match for each proposal, including description and value of any in-kind match.	Private sector cash $0 Private sector in-kind match $0 Private sector in lieu of cash Bobcat - Software development $1,000,000 Datacom International - Software development 1,600,000 Pedigree Technologies - Software development 1,000,000 Intelligent InSites - Software development 500,000 Total private sector in lieu of cash $4,100,000	Private sector cash $50,000 Private sector in-kind match Aldevron - Manpower and facilities $442,000 CSM - Technical consultant and others 250,000 Total private sector in-kind match $692,000 Private sector in lieu of cash Aldevron - Federal grants and contracts $3,500,000	Private sector cash $30,000 Private sector in-kind match Schiltz Goose Farms, North - Assets acquired and placed on farms $1,592,112 Aldevron - Various resources 200,000 Total - Private sector in-kind match $1,792,112 Private sector in lieu of cash Schiltz Goose R&D - Acquisition and outfit of hatchery and test facility $1,376,525	Private sector cash $250,000 Private sector in-kind match SUNRISE Renewables - Pilot plant facilities and salaries $1,284,644	Private sector cash $1,000,000 Private sector in-kind match American Petroleum Institute - Standards subscription $20,232 IHS - Software applications 647,175 Schlumberger Information Solutions - Software applications 4,875,224 Total - Private sector in-kind match $5,542,631	Private sector cash $840,000 Private sector in-kind match GeoOptics - Equipment and facility upgrades and facility lease costs $2,080,000 Private sector in lieu of cash GeoOptics - Radio occultation data $300,000	Private sector cash $0 Private sector in-kind match North Star Farms - New greenhouse $6,000 Private sector in lieu of cash North Star Farms - Land, greenhouses, and related equipment $220,000

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For the center's executive summary and budget detail see:	Appendix A	Appendix B	Appendix C	Appendix D	Appendix E	Appendix F	Appendix G
Emergency Commission recommendation/vote	Approve 5-1	Approve 5-1	Approve 5-1	Approve 5-1	Approve 5-1	Approve 5-1	Approve 5-1

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 (NDCC Section 15-69-02(1)).
2. Be approved by the North Dakota Economic Development Foundation (NDCC Section 15-69-02(2)).
3. Be approved by the State Board of Higher Education (NDCC 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 (NDCC 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 (NDCC Section 15-69-02(2)).

ATTACH:7