



Cass/Clay Economic Plan Executive Summary

The effects of globalization and the rapid pace of change in the global economy present challenges and opportunities for the Fargo Moorhead metropolitan statistical area (MSA)^{*}. Our community is currently in a solid economic position, ranking first among 381 metro areas in economic vitality according to Moody's Economy.com and enjoying one of the lowest unemployment rates in the United States. To maintain and enhance the region's economic vitality it will be necessary to continue to retain and expand existing industries as well as grow and diversify new wealth creating sectors. Accomplishing this will require Fargo Moorhead's leaders to continue pursuing innovative economic development strategies.

In 2006 the GFMEDC and its partners commenced a strategic planning process with the goal of identifying the innovative strategies that would lead to a new community vision: a growing, dynamic community that supports existing businesses and participates in the nation's growth sectors, competes nationally with a new and higher level of cities, and provides quality opportunities for its citizens.

Groups of industry leaders and academic experts in the broad areas of information technology (IT), life sciences and physical sciences were charged with the task of identifying specialized areas within their fields that had economic development potential. The groups met over eighteen months to identify and debate trends and future projections in their industries.

Based on their findings, group members ultimately identified two specialized areas as potential new economic sectors for Fargo Moorhead. The selection was based on the following criteria: 1) these specialized areas are increasing investment and jobs in the U.S., 2) they pay their workers high-than-average wages, 3) they have the potential to attract workers from around the country and retain our existing knowledge workers, and 4) Fargo Moorhead has the potential to become a national or global destination for their businesses and workers. The groups' deliberations culminated in the selection of the specialized areas smart technologies and vaccine development.[†]

^{*} The term "Fargo Moorhead" includes all of Cass County, N.D. and Clay County, Minn.

[†] For further validation, the GFMEDC also solicited third-party input on the selected areas from experts outside the community.

Vaccine Background

In the past, vaccines were a neglected, commoditized aspect of pharmaceutical companies' portfolios. However, during our strategic planning meetings experts and industry leaders accurately predicted that three emerging trends would increase the demand of vaccines significantly in the near future: healthcare reform, with a particular focus on preventative medicine such as vaccines; bioterrorism threats; and pandemic outbreaks.

Smart Technologies Background

Smart technology is a broad term to describe the hardware and software components that allow machines and devices to communicate across networks, as well as the networks themselves. Smart technologies allow companies to make their products more convenient and increase safety and efficiency. In early 2006, our IT leaders accurately predicted that smart technologies would permeate our lives in ever-increasing ways over the foreseeable future.

Site Selection Review

In addition to an economic review and analysis, the GFMEDC conducted a review of site selection patterns for emerging smart technology and vaccine companies.

Companies in smart technologies and vaccine development employ a knowledge-driven site selection model. Their main considerations are a community's ability to provide, develop and attract knowledge workers, and its research and academic capacity in the disciplines that support their business. Other important issues include high-quality air service, state-of-the-art telecommunications infrastructure, and support for the commercialization of technology and access to capital for entrepreneurs.

Based on our research, the GFMEDC and its partners have developed a strategy that will position Fargo Moorhead to attract investment and jobs in smart technologies and vaccine development. The pillars of the strategy are:

- ❖ Air Service
- ❖ Research and Development Activities in Smart Technologies and Vaccine Development
- ❖ University Curriculum Development and Alignment in Smart Technologies and Vaccine Development
- ❖ Entrepreneurial Infrastructure
- ❖ K-12 Science, Technology, Engineering & Math (STEM) Strategies
- ❖ Telecommunications Infrastructure

Research and Development Activities in Smart Technologies and Vaccine Development

The cornerstone of our plan is developing a critical mass of intellectual capacity, research expertise and university specialization in the specialized areas of vaccine development and smart technologies.

The plan recommends using a variety of funding sources to encourage research activities in Fargo Moorhead. Concepts being considered for funding include:

- ❖ developing a Smart Technology Research Institute and/or a Vaccine Development Research Institute,
- ❖ attracting nationally-and world-renowned talent in smart technologies and vaccine development,
- ❖ providing seed or match funding to attract grants and contracts,
- ❖ buying and housing equipment that can be shared by a number of start-up companies.

Air Service

In order to improve service for business travelers, as well as leisure travelers, the GFMEDC will continue to work with the Fargo Municipal Airport Authority to:

- ❖ Enhance international connectivity,
- ❖ attract new carriers to increase competition and decrease fares,
- ❖ improve schedules, and
- ❖ increase the number of daily departures and arrivals at Hector International Airport.

Communities nationwide are recognizing the role that air service plays in a vibrant economy. Affordable fares, direct flights and business-friendly schedules are important to the retention and expansion of existing companies as well as the recruitment of new ones. Due to the fierce competition between communities to land new carriers and increase service, the plan recommends that Fargo Moorhead create a seed fund to increase the region's competitiveness in attracting new carriers or expanding services. In cases where the community and its businesses stand to benefit from improved service, this fund could be used as a source of incentive funding to assist in closing airline negotiations.

University Curriculum Development and Alignment in Smart Technologies and Vaccine Development

The Cass/Clay Economic Plan recommends strong support for activities that will increase the intellectual and research capacity of the Tri-College University higher education institutions – North Dakota State University, Minnesota State

University Moorhead, and Concordia College – in disciplines related to vaccine development and smart technologies. Important components of this strategy include curriculum development and alignment, strategic faculty hiring and student recruitment initiatives. Tri-College University’s unique policy of allowing students enrolled at any of the institutions to take courses at the other two and apply the credits to graduation at the home institution will allow the universities and their students to mutually benefit from these strategies.

Entrepreneurial Infrastructure

Entrepreneurship is an important long-term job creation strategy. To facilitate new business formation, the Cass/Clay Economic Plan recommends developing metro-wide strategies in the following areas:

- ❖ Creating pathways to allow university faculty and students to start businesses and transfer their intellectual property into the private sector,
- ❖ infrastructure and incubation facilities, and
- ❖ access to capital.

One of the deepest sources of innovative and entrepreneurial ideas is research being done by faculty and students at our universities, particularly in the STEM fields. Turning these ideas into economic activity and job creation will require efficient pathways for technology transfer and commercialization into the private sector. To facilitate this we recommend reviewing, and revising if necessary, university policies relating to conflict of interest, conflict of commitment, and commercialization.

This plan supports the development and enhancement of incubators in the metro area. Incubators are organizations that support the entrepreneurial process, helping to increase survival rates for startup companies by providing a variety of services including physical space, technical support, administrative services and business networking. The community has improved significantly in this area over the past few years with the development of the Technology Incubator at the NDSU Research & Technology Park. As we continue to make progress in the area of vaccine development, it will be necessary to address the community’s need for wet lab incubation space as well.

The Cass/Clay Economic Plan also recommends measures that will increase the incentive for individuals to invest in start-up companies. This includes supporting legislation on the state and federal levels for expansion of seed and venture capital tax incentives and supporting the creation of a Fargo Moorhead pre-seed investment fund that would target higher-risk technology business opportunities.

K-12 Science, Technology, Engineering & Mathematics (STEM) Strategies

The majority of industries spurring economic growth today and into the future require scientific and technical skills related to the STEM disciplines. A strong education in the STEM disciplines is critical to all aspects of economic development: it benefits both existing and potential new employers by ensuring a pool of qualified workers, it facilitates the innovative ideas around which new businesses are built, and it prepares students for future job opportunities in high-demand fields. A community reputation for K-12 STEM education excellence also serves as a workforce recruitment tool.

This plan recommends a number of strategies to increase achievement in, and awareness of, K-12 STEM education. This includes:

- ❖ Maintaining our task force of education and community leaders whose mission is to advance awareness and participation in STEM subjects among students and parents,
- ❖ participating in local and state discussions and policy-making regarding college scholarship programs directed at students pursuing degrees in STEM disciplines, and
- ❖ exploring the creation of a community-wide coordinator of STEM activities between K-12, higher education and the business community.

Telecommunications Infrastructure

The Cass/Clay Economic Plan recommends working with the federal and state governments to secure funds for the recruitment and installation of the Northern Tier fiber optic information services. A virtual network connects NDSU with other research institutions across the country. In addition, we recommend working with the Minnesota and North Dakota state governments and our higher education institutions to extend the network from NDSU to MSUM and Concordia.

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