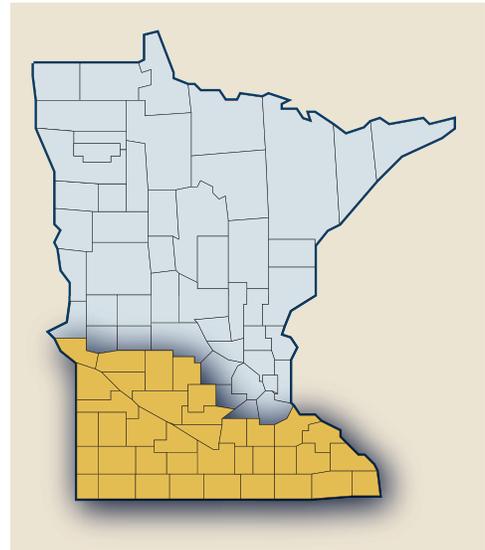

Southern Minnesota's Economic Future

Findings, Strategic Framework, and Game Plan



FRIDAY, MAY 15, 2009

CENTER FOR REGIONAL COMPETITIVENESS
RURAL POLICY RESEARCH INSTITUTE



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The Southern Minnesota Competitiveness Project aimed to improve the competitiveness and bolster the long-term economic well-being of the Region. The Region is comprised of 38 counties stretching across the southern third of the state, with a total population of 988,000. The project was self-funded by 16 partners from the private sector—including a financial institution, two prominent philanthropies, and others. These partners realized that staying ahead in the “Global Economic Olympics” requires thinking and acting at a regional scale.

The Project had four principal goals:

1. Strengthen collaboration and the region’s framework for development action;
2. Identify what the region does best in the global economy;
3. Prioritize public investments critical to making the Region a world-class leader; and
4. Enhance the region’s capacity to innovate, grow entrepreneurs, and create wealth.

Project partners have made enormous strides in achieving the stated objectives. Working with the RUPRI Center for Regional Competitiveness, the Project has brought together extensive activity on twin fronts—analyzing the Region’s best economic options and facilitating a region-wide dialogue on the Region’s best strategy.

The analysis encompassed four different assessments carried out over the past 12 months:

- Structural analysis, to identify the Region’s current specializations;
- Business cluster analysis, to gauge competitive business strengths;

- Impact analysis, to compare impacts from new investments; and
- Innovation capacity analysis, to assess the Region’s current capacity to innovate.

The dialogue engaged more than 1,000 public, private and non-profit leaders from all corners of the Region and from all types of organizations. Ten local roundtables, three regional roundtables, a Futures Summit, and several meetings among project partners were convened over the past 12 months. These events had four main objectives:

1. Pool knowledge about the Region’s economy, including a thorough mapping of the Region’s distinct economic assets.
2. Identify unexploited opportunities, focusing attention not on what is but what could be.
3. Weigh strategic opportunities, gathering input to craft the best possible strategy for future economic development; and
4. Inform the Region, providing objective information on the Region’s challenges and opportunities, and show the benefits of regional collaboration in seizing new opportunities.

This report is the culmination of all these efforts. Section one summarizes key findings from the Project. The principal finding is that the Region can tackle overriding concerns about a slide in per capita incomes and an exodus of talent, but only if it adopts a new approach to economic development. The good news is that the Region has bright opportunities to seize. Section two outlines a strategic framework to guide this new approach. The framework has three pillars: create an enabling organization to implement the Game Plan, focus on transforming the Region’s economy, and boost the Region’s capacity to innovate and create wealth. Section three puts forward an Economic Game Plan to seize new opportunities over the next two years. It describes 16 concrete action steps under three main categories: innovation, renewable energy, and manufacturing. Taken together, these actions aim to change the field of play, creating the best possible conditions for new and existing businesses to capture the opportunities emerging on the Southern Minnesota horizon.

PRINCIPAL FINDING

The Southern Minnesota Region has a remarkable collection of economic assets, yet incomes are eroding compared with the rest of the state and many parts of the nation. The Region has significant competitive strength in a handful of exciting new areas of opportunity that hold great promise in lifting incomes and creating wealth. To seize these competitive advantages, however, it must fortify its approach to development, commit to a new set of public and private investment priorities, and execute a new game plan focused on its best economic opportunities.

SPECIFIC FINDINGS

1. *Today, the Region’s economy is heavily dependent on three main sectors: food and agriculture, health care, and manufacturing.*

Together, these three industries add roughly 120,000 jobs to the Region beyond national averages. As a result of this unique specialization, the Region’s current economy is best described as a “three-legged stool.” The Region’s prowess in these three core sectors builds a strong foundation for growth. By themselves they cannot provide the economic gains the Region seeks, but they lend critical support to new opportunities on the horizon.

2. *The Region enjoys many measures of prosperity, but residents are worried about two powerful trends: a persistent slide in per-capita incomes and the ongoing exodus of its young people.*

Southern Minnesota is losing ground relative to the rest of the state, and especially compared with the Twin Cities. Per capita incomes in the Region are about 82 percent of the state average, and appear to be headed lower. What is more, 35 of the 38 counties across the Region have lost population over the past 25 years. The exodus is concentrated among those younger than 45. The outmigration is driven in part by ongoing consolidation in farming.

3. *The Region is excited about new economic opportunities now appearing on the horizon—notably bioscience and renewable energy—but efforts to develop these areas lack focus and have not yet achieved critical mass.*

The Region was an early leader in ethanol production, and retains a strong concentration of ethanol plants. Still, these plants account for comparatively few jobs. Wind energy is becoming more widespread, especially across the southwestern portion of the Region, but big questions persist about the adequacy of grid infrastructure and overcoming the fluctuations inherent in generating electricity from wind turbines. Finally, the Region has nodes of expertise in animal and plant genetics, but there are no strong connections yet between the Region’s agricultural powerhouse and its world-class institutions in medical research and practice.

In addition to bioscience and renewable energy, analysis shows the Region has strategic opportunities in four more areas:

- Manufacturing
- Health care
- High technology
- Food and agriculture.

4. ***While the Region can boost its economy through strategic investments in all of the areas of strategic opportunity mentioned above, manufacturing, bioscience, and high technology offer the biggest upside in lifting incomes. Renewable energy may offer similar promise, but the industry is so new that income impacts are difficult to estimate.***

Analysis shows that investing an additional \$1 million in the Region's six strategic opportunities will yield between \$1.49 million and \$1.62 million in additional output over time. A more meaningful metric to guide the Region's investment decision may be the income per job generated among the six areas of opportunity. The added value inherent in new opportunities in bioscience, manufacturing, and high technology indicates potential annual incomes ranging between \$45,000 and \$48,000 per job, a mark that stands well above average wages in the Region today. (By comparison, income estimates are closer to \$25,000 per job in health care and in food and agriculture.) Upside potential may exist in renewable energy, but the emerging nature of the opportunity makes projections difficult.

5. ***The Region boasts many innovation assets, including an outstanding system of primary, secondary, and tertiary education, yet its capacity to innovate and grow entrepreneurs does not appear to match the quality of these institutions. Moving new ideas to the marketplace is hampered by a widespread lack of equity capital to fund start-up businesses.***

Measures of innovation capacity show that much of the Region lags behind the nation in the human capital and dynamism required in a knowledge-driven economy.

Rochester represents a powerful innovation center, yet even its leaders wonder whether the Region is harnessing its full potential. More generally, the Region's outstanding institutions of higher learning are not fully engaged in seizing new economic opportunities, though there are encouraging signs that this is changing. There is a surprising lack of equity capital to fuel business start-ups in Southern Minnesota. This is a great irony because the Region possesses significant wealth. Much of it, however, is in the form of farmland.

6. ***The Region's culture has long cultivated a spirit of collaboration that brings together neighbors, counties, and the public and private sectors. However, some boundaries remain, which the Region must overcome if it is to seize new economic opportunities that demand critical mass, targeted investment, and new business models.***

The Region has a very strong foundation of partnership. This is manifest in two large regional philanthropies, several multi-county workforce investment boards, the new Renewable Energy Marketplace, and deep roots in agricultural cooperatives. That said, currently there is no organization that spans the entire 38-county Region. There is also no organization to set investment priorities, advocate for policies critical to the Region's economic future, and translate the Region's strategy into action. One broad challenge in both crafting and implementing the Region's strategy will be embracing the much more diverse population brought about by a strong influx of immigrants, many of whom represent a different ethnic profile than was true in the past.

Project findings should greatly inform and influence the Region’s strategy going forward. The strategy relies on three main pillars. The first is forming an enabling organization to steer the strategy, implement it, and monitor it over time. The second is seizing the opportunity to build powerful new economic engines in bioscience and renewable energy, drawing on the region’s current strength in manufacturing, health care, and food and agriculture. The third is bolstering the Region’s capacity to innovate, grow new businesses, and create wealth.

CREATE AN ENABLING ORGANIZATION TO IMPLEMENT THE STRATEGY

The Region will need an enabling organization to implement its Economic Game Plan. The Southern Minnesota Regional Competitiveness Project has provided a critical foundation for developing the plan, but it will not unfold on its own. Priorities will need to be set, activities coordinated, and actions taken on behalf of the Region. Indeed, evidence from around the world shows that the most competitive regions create effective mechanisms to translate region-wide partnership into action. As result of this Project, Southern Minnesota now has effective partnership. But the mechanism for translating this collaboration into a coordinated set of action steps does not yet exist. This must be a priority before the Economic Game Plan described below can be implemented. The proposed Southern Minnesota Opportunity Roundtable has the best potential to be this enabling organization.

While the proposed Roundtable could be operated effectively in many different ways, it must ultimately carry out five key functions.

- *First, it must set investment priorities—the very essence of strategy.* Such difficult choices will be critical in an environment of limited public funding from state and Federal governments. That is, regions that build strong consensus around key priorities and articulate those priorities well are the most likely to find receptive ears from legislators.
- *Second, it must champion public policies critical to the Region’s future, since these provide the critical context for its opportunities.* The findings of this Project highlight several areas of policy that must shift if the Region wants a climate most conducive to seizing its opportunities. Renewable energy regulations are a good case in point.
- *Third, it must foster the best possible conditions for bringing about economic synergies.* To a very large extent, the enabling organization has the mission of “connecting the dots” throughout the Region. The bioscience synergies among Mayo Clinic, The Hormel Institute, and agricultural groups that have already been created in the Project serve as a clarion call to find others.
- *Fourth, it must coordinate a wide range of actions in the Game Plan with an overriding goal of ensuring the whole is greater than the sum of the parts.* In practice, this means that the Roundtable must advocate for the “forest” of region-wide economic good, not just the “trees” of individual projects. A very wide range of strategic activities is about to unfold in Southern Minnesota. The enabling organization must coordinate these to best effect in the Region.
- *Fifth, it must track progress against the milestones set out in the game plan, recommending to the Region mid-course corrections when necessary.* Economic conditions change and new technologies open new economic horizons. The

Southern Minnesota Economic Game Plan must be dynamic, and the only way to ensure that is to make sure the enabling organization has both the decision capacity and the support of the Region to shift course as conditions change.

In short, the Southern Minnesota Regional Competitiveness Project fostered new partnership across the region, but continued collaboration will require new ways of making decisions, planning activities, and managing projects. To meet these new requirements, the proposed Roundtable should be founded.

As to its organizational structure, we recommend that the enabling organization bring together both horizontal and vertical components under one umbrella. The Roundtable would focus on the big picture and coordinate the overall strategy for the Region (the horizontal component), but a series of “forums” (the vertical component) would delve into specific action steps aimed at one strategic opportunity. These forums would operate independently and with the engagement of leaders from across the Region, but they would also be associated with the work of the proposed Roundtable. In light of the strategic framework and game plan, four forums appear especially important to form at the outset: Southern Minnesota Bioscience Forum, Southern Minnesota Renewable Energy Forum, Southern Minnesota Manufacturing Forum, and Southern Minnesota Innovation Forum.

The enabling organization will draw the greatest strength of purpose and the deepest support by bringing together the best of both worlds—a big picture view of the game plan and the expertise embedded in the specific areas of opportunity. Combining the Roundtable with the industry-specific forum appears to be the best way to capture this strength. An example of this type of organization model is Clallam netWorks in Washington state (www.clallam.org). They have achieved significant success by organizing several “vertical” industry groups, but ensuring the region’s strategy cuts across all of these groups.

TRANSFORM THE SOUTHERN MINNESOTA ECONOMY

Southern Minnesota is relatively prosperous compared to many other parts of rural America. But as many findings from this Project confirm, the Region is not content with its current economy. Per capita incomes are sliding and the exodus of talent is persistent. What is more, there is agreement that the Region can do more with the economic hand it has been dealt. Thus, there is strong consensus that the Region should reach further—to identify the best ways to build on what is in the best interest of the region in a transformative way. The Region’s transformation strategy has two main elements.

The first element is to recognize the importance of the Region’s “three-legged stool” to the short- and medium-term economic success of the Region, but focus the Region’s development strategy on the most promising opportunities identified in this Project. Everyone realizes that these new opportunities will develop over time, but they offer the added benefit of making the Region’s existing mainstay industries more competitive. There is natural reluctance on the part of leaders in the Region to understate or ignore the main cogs in today’s regional economy—manufacturing, health care, and food and agriculture. That said, leaders also recognize that staying on the current path will not produce the economic gains the Region truly wants. They also understand that in highly competitive global markets, the Region’s current line-up of products is under a growing threat, especially in manufacturing. A sound overall approach, therefore, is to pursue a development strategy whose overarching objective is transformation while simultaneously pursuing promising efforts that keep the current triad as competitive as possible.

The second element is to target the Region’s development strategy on bioscience, renewable energy, and high technology. Advanced manufacturing is also part of the mix, though probably in a supporting role. Southern Minnesota is very well-positioned in all three target sectors. Cluster analysis, asset-mapping, structural analysis, and growth projections confirm distinct competitive opportunities—in all three. Equally important, these opportunities resonate with public and private leaders across the Region. The Region must develop clear strategies for each of its key opportunities, while exploiting some potential synergies across them. The role for manufacturing in the Region’s strategy is more difficult to pinpoint, partly due to the wide range of factory output today. Still, the Region’s manufacturing capacity will be a critical ingredient in seizing market opportunities in its three transforming opportunities.

Bioscience is one of the most intriguing opportunities for the Southern Minnesota economy, meriting a featured role in the strategy. While life science research has been the holy grail of economic developers across the United States for the past 5 years or more, the opportunity in the Region is unlike that of the competition between Boston and Palo Alto. Southern Minnesota has all the right factors in place to create the first rural region where medical science, agricultural science, and farm productivity blend into a brand new industry. Few, if any, rural regions in the nation have the unique constellation of medical research and an agricultural powerhouse that spans farms, plant genetics, and animal genetics.

Because the Project has already achieved significant momentum in bioscience, the *Economic Game Plan* outlined below will not focus on this area. This momentum has built steadily over recent months. An exclusive bioscience dialogue began in November 2008 in Rochester, bringing together leaders from Mayo Clinic the Hormel Institute, and farm organizations. That dialogue has now evolved

into a discussion of concrete economic projects in the Region. Such activities will leverage the ongoing work of the BioBusiness Alliance, a critical partner in advancing these opportunities.

Every effort should be made to formalize the dialogue (perhaps as the Southern Minnesota Bioscience Forum), sustain it, and engage additional participants. The dialogue should focus on two early opportunities for success. The first is exploring innovative business models in plant-made pharmaceuticals and other leading edge bioscience niches that can create maximum growth for the Region as a whole. Southern Minnesota has been a pioneer in agricultural cooperatives. Still, the new bioscience opportunities will likely stretch any existing business models. Because early decisions about the overall structure of the business model will shape both long-term success and the distribution of benefits, the Region cannot delay in tackling thorny decisions about how new businesses are capitalized and organized. The second early opportunity on which the dialogue should focus is identifying areas where public investments can fill gaps in private research. The Region has vast potential in bioscience, but it must know exactly which public investments in medical and agricultural research will best expand its economic horizons. These priorities are not yet known. With this information in hand, the Region will be able to articulate specific needs and goals to state officials and better elicit their support.

Renewable energy must be another centerpiece of the Region's transformation strategy. There is enormous buzz surrounding renewable energy in Southern Minnesota, driven in part by the Region's commanding array of biofuel, wind, and other renewable energy assets. Yet the sheer breadth of opportunity is preventing a clearly focused strategy to seize new markets in renewable energy. Industry leaders appear eager to enter into this strategic dialogue, and the Region can provide the neutral place for the discussion to occur. In sharpening the focus, the Region will have to confront a number of vexing challenges and huge investments on which its renewable energy future depends. These include enlarging grid capacity, overcoming the load fluctuations inherent in electricity generated by wind, creating a much more favorable regulatory framework, and designing business models to ensure the Region captures as much wealth as possible from the development of its enormous energy resources.

The Region's high technology industry can play a powerful supporting role in bioscience and renewable energy. While leaders believe high technology has distinct opportunities of its own, the greatest economic benefits may lie at its intersection with the two other transforming opportunities. Key to exploiting this nexus appears to be harnessing the Region's considerable technological horsepower in ways that propel the other key target opportunities. Two actions hold promise going forward. The first would be to build a stronger linkage between higher education and businesses in the Region.

A common concern among the Region's leaders is the sizable gap between technology research at public universities and business progress. Ways must be found to close this gap. This will require creating an "innovation marketplace" where cooperation and technology transfer can occur more easily. It will also require creating new incentives for academic researchers to connect with the Region's businesses. The second is creating the conditions in which high technology companies and researchers can synergize with opportunities in bioscience and renewable energy. While there are encouraging signs that such synergies are occurring—for example, IBM's super-computer support of research at The Hormel Institute—the opportunities are far from exhausted. The Southern Minnesota Innovation Institute detailed below may be a big step forward in capitalizing on the Region's technology assets.

Manufacturing will also play a vital supporting role in seizing the Region's transforming opportunities. The Region's manufacturing base is large, employing one in every five workers across Southern Minnesota. It is also extremely diverse, producing everything from high-tech glass for the nation's office buildings to nuts and bolts. This Project's analysis focused attention on the "middle third" of manufacturing, which excludes food processing and high technology. This broad swath of industrial might across the Region currently lacks strategic focus. There appear to be several areas of strength that would benefit from targeted efforts to strengthen supply chains and clusters. These areas of strength can also lend significant heft to creating new markets in bioscience and renewable energy. To do so, much more integrated discussions across these diverse sectors must occur. Bringing this about is one of the "connect the dots" functions for the proposed Southern Minnesota Opportunity Roundtable.

BOOST CAPACITY TO INNOVATE AND CREATE WEALTH

The Region appears to be producing far less innovation than its current line-up of innovation assets could offer. Closing this gap is crucial to seizing the Region's new economic opportunities, since they will be driven mostly by new technologies and new business models. While there is growing recognition of this reality, the Region has not yet embraced an "innovation agenda." What is more, while all agree Southern Minnesota has exciting new economic opportunities, no one knows how these will be seized. Will they be captured by businesses from the Region or by businesses beyond the Region? The answer will have profound effect on how much new wealth is created in the Region. Thus, serious attention must be given not only to the innovations that unlock new economic potential, but the business models used to turn the key. In total, Southern Minnesota's innovation is both big and critical

to future economic progress. That said, the Region has a powerful line-up of innovation engines, a pioneering spirit that animates its entrepreneurs, and significant stores of wealth waiting to be harnessed. Three steps can help to manage the big innovation task ahead.

The innovation engines throughout the Region must be connected in ways that spark new synergies for economic growth. The dialogue this Project spawned on bioscience is the new face of this opportunity. Basic research on plants, animals, and human health are all converging at the level of the cell. Southern Minnesota has potent presence in each. Yet they had never been in the same room to explore ideas like plant-made pharmaceuticals. The power of such connections should not be underestimated. The critical question is, “What is the best way to foster such synergies not just once but in a persistent, ongoing way?”

A related issue is how to broaden and deepen the “innovation culture” in the region. The Region’s innovation agenda is big and critical to its future economic progress. Yet innovation cannot simply be left to scientists and inventors. It must infuse the schools, businesses, governments, and universities of the Region. Leaders express doubt over whether it does so today. The innovation indexes developed for the Region confirm these doubts. The Region’s human capital index, for instance, is at a higher standing relative to the nation than are measures of advancing productivity, such as patents. This could mean the Region is essentially getting a low rate of return to its current investment in education.

The Region must build a stronger support system for its entrepreneurs. There are a lot of organizations working in this field, but they mostly work in isolation. If the Region is now entering a new era of region-wide collaboration to seize a brighter economic future, it also

makes sense to connect a regional network of support for business. The urgency for doing this stems from the realization that new and existing businesses will fuel more of the Region’s growth than in the past. (Put another way, in a globalizing economy, economic recruitment will be much more difficult than over the past half century.) In addition, entrepreneurship offers the most promising pathway to progress for many of the Region’s new immigrants. The Region has outstanding schools, but the principal focus remains giving students the skills to work for somebody else. Providing students the skills and values necessary for entrepreneurial success will not only build new economic engines, it will also keep the “best and brightest” in the Region.

Build new equity funds to harness the Region’s wealth and propel new enterprise. The Region is comparatively wealthy, but it recycles comparatively little of its wealth in new businesses. It needs a strategy to build a much stronger network of equity funds to fuel a new generation of businesses. A variety of models can be explored, but the key is to give new business owners ready access to the capital they need. A critical element in this overall initiative is to explore tax legislation at the state level that will encourage the capitalization of these funds and appropriate risk-taking by businesses. This will require careful examination of possible tax credits to wealth holders in the Region who place assets in the funds, as well as possible capital gains credits to business owners who grow successful companies in the Region. The importance of the Region’s equity capital strategy transcends its role in just helping new businesses. It also provides the avenue to building wealth among residents of the Region as new economic opportunities are seized. Put another way, the Region wants new economic engines, but it also wants to generate wealth for the people who actually live in Southern Minnesota.

THE SOUTHERN MINNESOTA ECONOMIC GAME PLAN

The Findings and Strategic Framework that result from the Southern Minnesota Regional Competitiveness Project provide a sound foundation for the Region to move forward. Equally important, though, will be executing a detailed Game Plan that aims to seize the best opportunities identified in the Project. This Game Plan recognizes four main areas of activities going forward:

- INNOVATION,
- BIOSCIENCE,
- RENEWABLE ENERGY, AND
- MANUFACTURING.

Priority actions for bioscience have already been identified in the Project under the leadership of key industry and public leaders. Thus, this recommended Game Plan focuses on the three remaining areas. In each case, we assume that the Southern Minnesota Opportunity Roundtable will coordinate the overall Game Plan, set priorities when necessary, and help marshal resources in the Region to implement critical initiatives. We further assume that action steps in innovation, renewable energy, and manufacturing will be undertaken by respective “Forums” (as outlined above) working in concert with the Roundtable. Thus, the activities are summarized under the headings of the three respective forums. *Appendix A* contains a full list Game Plan activities and associated timelines, outputs, and measures of success.

INNOVATION FORUM

The goal of the innovation Game Plan is to create stronger synergies across the Region’s many engines of innovation, to foster a broader

and deeper culture of innovation, and to help innovation spur more business starts and more profitable businesses in the Region.

1. *Map the Region’s current pipeline of innovation and its e-ship support organizations to help guide the Region’s innovation initiatives.*

The Project provides a solid outline of the Region’s capacity to innovate and grow new businesses. To enhance that capacity, however, the Region must begin “connecting the dots” in both its innovation pipeline and its network of entrepreneurship organization. A critical starting point is to conduct a detailed mapping of the Region’s current innovation engines and its network of support for entrepreneurs. A large number of public and private organizations are involved in both the innovation pipeline and in the entrepreneurship network. Today these organizations largely operate independently. Tomorrow, they must work more in concert. The Innovation Forum can help these connections happen by developing a ready map of the pipeline and the network. Such a map can be developed fairly quickly.

The Innovation Forum should assemble a small team, perhaps four to six in size, to map the Region’s innovation pipeline and the entrepreneurship support network. The Region has a strong slate of experts in this arena in organizations that have significant commitments in innovation and entrepreneurship. These include the Initiative Foundations, Mayo Clinic, The Hormel Institute, business schools in the MNSCU system, AURI, the new bioscience center in Willmar, and Schwann’s University.

While this is a “mapping” exercise in the beginning, its real objective is to develop insights on where synergistic connections can be drawn. Such insights can only develop, however, once all leaders in the Region understand what the map looks like today. Such a map does not currently exist.

2. ***Launch a new series of region-wide “awards” to lift up and celebrate innovation in schools, business, civil society and higher education.***

Experts agree that creating an innovation culture requires that innovation be a shared value of the region. An effective and low-cost way to do this is to lift up innovation in the public eye through celebrating innovation successes.

The Southern Minnesota Opportunity Roundtable should become the champion of such success through a new series of awards that recognize notable achievements in education, business, civil society, and higher education. The goal is to create innovation “Oscars” that inspire everyone in Southern Minnesota to strive for higher achievement in many different types of innovation. By awarding “Oscars” across many segments of the Southern Minnesota economy, the organizers will also send strong signals that innovation must be a region-wide culture. It is not just the job of bench scientists, important as they may be.

The Roundtable should create panels of judges to select winners in the respective categories. The awards could be handed out in one of two ways. One approach would be to organize a Southern Minnesota Innovation dinner, which might be sponsored by leading public and private organizations and could be a fund-raising opportunity to invest in other innovation activities in the Region. The other approach would be to piggyback on other events in the Region. For instance, the innovation “Oscar” for business might be awarded at a recurring business meeting in the Region. One challenge of this approach is that partner organizations may represent a very different geography than the one that now defines the Southern Minnesota Opportunity Roundtable.

3. ***Design an Innovation Institute to foster innovation and entrepreneurship synergies, while connecting e-ship support across existing organizations.***

Ensuring that Southern Minnesota reaps the biggest harvest from its innovation will require an embedded culture. But it will also require creating a physical hub that connects the Region’s many and considerable innovation engines with the greatest possible synergy. Many leading regions throughout the nation, indeed the world, are now creating institutions that deliberately connect the innovation “dots” in their respective region. There is no such hub today for Southern Minnesota.

The Innovation Forum should commission a small team to develop a blueprint for an Innovation Institute. As with the team assembled for item number one above, this team could be

drawn from many organizations that already have a significant presence in innovation in Southern Minnesota. The team, likely four to six in size, should include public, private, and nonprofit leaders. The team should focus on a broadly framed blueprint that answers three critical questions.

Question One: What type of institute will best connect innovation across the Region?

A wide range of regional innovation hubs are now being built across the nation and the globe. Some are based at universities, others are stand-alone nonprofits. One model that holds promise for Southern Minnesota is the Institute for Advanced Learning and Research in Danville, Virginia (www.ialr.org). This is a rural region, far-removed from a tier-one research university. This region is anxious to use innovation to transcend the basic manufacturing on which it has long depended. Another model is the MaRS Development District in Toronto (www.marsdd.com). This is an urban-based innovation center, but its bioscience focus holds power for Southern Minnesota in light of the Region’s enormous potential in this sector.

Question Two: Under what aegis is the institute formed?

Many organizations in the region may vie for this valuable institute. But care must be taken before attaching it to any university, nonprofit, or other existing organization. Another possibility is to attach the institute directly to the Roundtable—the two may have significant synergies from an organizational point of view.

Question Three: How will the Institute be funded?

Given the existing landscape of public, private, and nonprofit innovation engines, some combination of funding for the Institute may be desirable. However, the funding decision will also be closely tied to the answers to the first two questions. Lessons can also be learned from the experience of other regions, such as the two models outlined above.

4. ***Identify the institutional steps and tax credits required to launch a new equity fund in the Region.***

The Region has considerable wealth, but most of it is not recycled into new businesses in the Region. Given the Region’s need to launch new knowledge-driven businesses, creating an effective equity capital fund to launch more business starts is a transcending goal of the Region’s innovation agenda. To meet this goal, the Investment Forum should task a team to frame recommendations on the best type of fund to build—and on the best tax credits that may be critical to attracting start-up

capital to the fund. This team should bring together a handful of experts from finance, business, government, and academia and be tasked with framing the creation of the fund.

The Region can choose from three types of funds. The first is a community foundation. Under this approach, a single foundation could be set up to cover the Southern Minnesota region to be a focus for charitable giving. In turn, the foundation could develop grant programs and revolving loan funds to support new businesses. The Nebraska Community Foundation is a good example of this approach (www.nebcommfound.org). This is not a true equity fund, but could be a focal point for entrepreneurship support.

The second is to help organize angel funds in the region. This approach tries to connect high net worth individuals to fund entrepreneurs. This approach can be highly effective and several organizations have developed sound guidelines for helping angel networks to form, including the Kauffman Foundation (http://web.kauffman.org/pdf/angel_guidebook.pdf). The Region has many wealthy individuals, so there is a strong basis for this approach. That said, angel fund networks tend to be idiosyncratic to the individuals involved, and often focus on a particular sector or set of communities.

The third approach is to create a community development venture capital fund (CDVC). CDVC funds provide equity capital to businesses in under-invested markets, seeking positive financial returns, as well as the creation of good jobs, wealth, and entrepreneurial capacity (www.cdvca.org). These funds are often capitalized through a combination of public, private, and philanthropic sources. They can also be a particularly good fit for rural regions.

Based on the Region's need and its resources, a CDVC fund appears to be the best model. Many wealth holders in the Region place a premium on investing in ways that improve its economic future. This aligns with the "double bottom line" approach inherent in a CDVC fund. A CDVC fund would also provide the scale and scope required to invest in new businesses across the Region—and across the range of economic opportunities the Region now faces. A good model fund to explore would be Kentucky Highlands, which has operated successfully in a rural part of Kentucky for more than 40 years (www.khic.org).

Tax credits could be a powerful tool to help capitalize a new CDVC fund for Southern Minnesota. Several states have enacted tax incentives to encourage the creation of various types of community investment vehicles, including CDVC funds (http://www.cdvca.org/index.php?option=com_content

[&view=article&id=159&Itemid=88](http://www.cdvca.org/index.php?option=com_content&view=article&id=159&Itemid=88)). These provide a base of legislative experience on which Southern Minnesota can draw. Given the vast amount of regional wealth that currently takes the form of farmland, two legislative areas are promising. The first is credits for capital gains on farm sales that are directed to a CDVC fund in the region. The second is income tax credits to farms that direct assets to the fund. Credits for nonfarm wealth holders will also be important.

5. *Open The Southern Minnesota Innovation Institute.*

The Southern Minnesota Innovation Institute can provide a highly visible and effective means of ensuring innovation drives economic progress for the Region. The goal is to open the facility in 24 months, providing a real capstone to the blueprint created in step 3 above. In many ways, the Institute embodies the true spirit of the current Project—connecting dots and capturing and animating dormant synergies.

Successful completion of the Institute will require clear vision, inspired civic leadership, and broad funding support. Today, very few regions create vigorous regional systems for innovation. Southern Minnesota has all the makings to lead in this arena—especially now that leaders understand that the best economic opportunities emerge only at the regional scale. The dispersed set of innovation engines now scattered across the regional landscape provides a unique opportunity to "connect the dots." The leadership to connect them can only come from the Region itself. And while the task could seem daunting at first, it is worth reminding everyone at the outset that the physical scale need not be large. The idea is to provide spark to the innovation kindling already in the Region. In addition, as the models cited above prove, funding can come from a wide range of possible sources.

6. *Commence operations of The Southern Minnesota Equity Fund.*

As with the previous activity, this one represents a culmination of previous effort. Nonetheless, it is a worthy goal to open the Southern Minnesota Equity Fund in 24 months. In addition to a sound plan, there will be two keys to meeting this goal. The first is securing the initial capitalization. In the long run, it makes sense for the capital to arise from wealth holders in the Region; they care the most about the Region's economic future. At the outset, it also may be useful to explore philanthropies, regional businesses, state government, and universities' development funds as avenues for reaching a level of critical mass—perhaps \$50 million (although \$100 million would certainly be better!). The second is ensuring that the initial staffing is blue-chip, with strong experience in running

this type of fund. While the Fund will serve the Region's long-term economic interest, it can only do that by being superbly managed.

RENEWABLE ENERGY FORUM

The goal of the renewable energy Game Plan is to exploit fully the Region's rich array of renewable energy assets, while growing high-paying jobs and building wealth in the Region.

1. ***Create a Southern Minnesota Renewable Energy Forum to coordinate energy activities and foster synergies across the Region's diverse renewable energy assets.***

This first activity provides a formal structure in which synergies in renewable energy can be identified and seized in an efficient, ongoing way. Renewable energy leaders in the Region recognize the surfeit of renewable energy riches in Southern Minnesota. They also recognize that efforts to develop those resources now run in many different directions, often without recognizing obvious synergies. The Southern Minnesota Renewable Energy Forum provides a neutral place for this discussion to occur.

The Forum would be chartered with clear expectations that it would continue into the future as a critical actor to help guide all other renewable energy initiatives in the Region. The Forum's first meeting should be held within three months. An important goal is engaging the full breadth of renewable energy activity across the Region. It will also be important to link this group to the Renewable Energy Marketplace initiative. The Forum would be chartered with clear expectations that it would continue into the future as a critical actor to help guide all other renewable energy initiatives in the Region. There is a common purpose between the two. However, they also represent different geographies. Business leaders indicate that a Southern Minnesota identity has tangible value to them. Thus, linking the two groups while avoiding duplication appears to be the best course.

2. ***Prepare a Southern Minnesota Renewable Energy Regulatory Framework to create the best possible conditions for the development of the Region's renewable energy assets.***

The Region cannot afford to ignore the regulatory framework that surrounds the development of renewable energy. Federal and state regulations will both be important, but the Region has a real opportunity to influence state rules, especially if it speaks with one voice. Thus, a team drawn from the Forum should be tasked with preparing a short list of recommendations critical to the future development of

the Region's renewable energy assets. In turn, the Roundtable can bring broader Regional support and advocacy to this recommended regulatory framework. As in many of the other team activities described above, the task can be completed in relatively short order.

Early indications from business leaders suggest two areas that merit attention in the team's deliberations. The first is streamlining the process by which renewable energy facilities, including wind turbines and biomass facilities, are approved. Business leaders decry the current maze of regulations that often serve to inhibit the creation of the "green economy" in the Region. The second area that merits attention is the Region's gateway to regulators in St. Paul. Leaders are concerned about the fact that connections between regulatory agencies are rarely seamless. They also express frustration about the lack of continuity in key staff positions; it is not uncommon to deal with a new cast of regulators in a span of a few months.

3. ***Work with business schools in the Region to identify the best business models to develop wind and other renewable energy assets while maximizing wealth creation in the Region.***

The Region has vast energy resources, and new technologies could make the store of energy even bigger. A critical question is how much of the wealth that comes out these resources will stay in the Region. It makes a huge difference, for instance, whether a wind farm is owned by a corporate utility on the East Coast or a group of farmers and investors in the Region who not only own the land but also reap the wind. The business model that unfolds will help the region influence which of the two ownership outcomes becomes reality. The Region already has deep experience in cooperative ownership of corn-based ethanol plants, but the field appears more open on the newer forms of renewable energy. Wind farms, in particular, appear to be a wide-open frontier right now.

It makes sense, therefore, for the Region to try to get ahead of the curve and develop business models that will encourage not only renewable energy development but maximum wealth creation. The Region is home to several business schools, and a team of experts from these schools should be charged with identifying optimal business models for the new frontier of renewable energy in the Region. This technical task force should work closely with energy business leaders while drawing lessons from corn ethanol. The recommendations from this team also provide a good foundation for future work by the Southern Minnesota Equity Fund.

4. ***Commission a task force from industry and universities to identify the best technical solution to the load fluctuations inherent in electricity generation from wind.***

The Region has many opportunities in renewable energy, but wind will certainly be a big one. Harnessing the Region's powerful winds, though, cannot happen without serious attention to one of its inherent drawbacks—fluctuations in load. The answer to this problem will come from technology and possibly from creative combinations with other sources of energy. For instance, biomass or animal waste could be one of the load offsets.

The Region needs a good answer to this problem, and it needs it fairly quickly given the race with other regions to secure access to the electricity grid. A technical task force of four to six leading energy experts should be formed to tackle this problem, working in concert with regional business leaders who represent the full spectrum of renewable energy options in the Region. This task force will provide a tangible symbol of the ongoing benefits of the Renewable Energy Forum.

5. ***Create the Southern Minnesota Grid Plan to connect the Region's electricity suppliers with the Twin Cities and other major markets.***

A related problem, of course, is ensuring sufficient grid infrastructure to carry the Region's full potential in electricity generation. There are regional, state, Midwest, and national components to this issue. The Region must nest its capacity within those contexts. Nonetheless, there is great value in Southern Minnesota understanding the grid investments that most advantage its economic future, and articulating that plan with one voice.

The Southern Minnesota Renewable Energy Forum should develop such a plan, either through a task force or by facilitating a series of meetings on the subject. An important element of the plan should be exploring how the Region can build a productive partnership with electricity users in the Twin Cities, paving the way for creative funding strategies for the additional investments in the grid. While the Region has a compelling interest in greater grid capacity to transport its energy to the rest of the state and nation, the plan should not overlook another intriguing option. That is the opportunity to use more of the Region's renewable energy inside the Region. There may be growing markets for manufactured products produced with "green" energy. Thus, this group should hold discussions with manufacturers in the Region to explore whether this could be a significant "market" for the Region's considerable energy supply.

6. ***Launch the Southern Minnesota Energy Research Consortium, bringing together industry and university researchers to explore next-generation energy opportunities in the Region and identify high potential research projects, such as algae and cellulosic ethanol.***

Southern Minnesota has so many renewable energy options that the focus could easily be placed on seizing the best opportunities available today (as opposed to the future). By itself, however, such an approach will almost certainly leave some of the Region's potential on the table. The trade-off is illustrated by corn-based ethanol. To a considerable degree, Southern Minnesota is "ground zero" in corn ethanol, and was one of the first to capitalize on it. Yet volatile corn and oil prices put the industry in a tailspin in 2008, and many wonder if the future will belong to new technologies that yield higher energy efficiency with lower cost. Thus, there is a strong case for a sound R & D strategy for the Region.

As with many other activities in the Game Plan, this is less about investment dollars and more about "connecting the dots." One comment frequently heard in Project dialogue was that public investments in research do not always connect with businesses in the Region. Thus, the Renewable Energy Forum can play a very useful role by creating a Southern Minnesota Renewable Energy Consortium. The Consortium can be a neutral court in which to identify research critical to the Region's energy future. It can also be an ongoing advocate and monitor of effective collaboration between basic research and business growth in the Region.

MANUFACTURING FORUM

The goal of the manufacturing Game Plan is to bring focus to an extremely diverse manufacturing sector, make factories more competitive by strengthening key clusters, and create powerful synergies by combining the region's industrial prowess with emerging opportunities in bioscience and renewable energy.

1. ***Form a Southern Minnesota Manufacturing Forum to focus industrial initiatives across the Region and foster synergies throughout the sector.***

Manufacturing activity in Southern Minnesota is large but highly diverse. One in every five workers in the Region works in factories, yet that activity unfolds without much fanfare simply because it cuts across so many niches—literally everything from nuts and bolts to high-tech glass. With all of these factories competing with lower cost factories throughout

the world, the Region cannot afford to stand idly by and assume its factories will just keep operating.

Creating a Southern Minnesota Manufacturing Forum is a logical starting point to bring focus to new manufacturing initiatives. This Forum will provide a low-cost but effective way to identify and seize synergies across the Region's factories. It should aim to engage a full spectrum of business owners and factory managers to mirror the reach of the Region's industrial sector. It should have an ongoing charter, with the goal of guiding the other manufacturing activities listed below.

2. ***Build a Southern Minnesota Cluster Strategy to bolster the competitive strength of the Region's factories, using the Project's eight leading clusters as a starting point and focusing efforts on "missing link" industries that fortify clusters while adding jobs that raise incomes.***

There is strong evidence that a new focus on its manufacturing clusters will pay two dividends for Southern Minnesota. The first is to make its factories more competitive in global markets; this is a critical objective given the fact that those factories employ a big slice of the region's workforce and often provide high-paying jobs. The second is that cluster development is a solid path to broader economic gains in the Region.

Therefore, as its first initiative, the Forum should prepare a Southern Minnesota Cluster Strategy. Simply put, this strategy will identify critical clusters and focus on efforts that will strengthen them by supplying "missing links." A cluster can also be thought of as a supply chain. Southern Minnesota has many of these, but there are often parts of the chain that are not present. Filling in these voids adds economic activity, while making the other links more competitive. (For a general discussion of this overall cluster approach, see a study conducted by the National Governor's Association and the Council on Competitiveness: <http://www.nga.org/Files/pdf/0702INNOVATIONCLUSTERS.PDF>.)

The Region's cluster strategy should have three key elements. First, it should identify those clusters that merit early attention for further development. A good starting point for the candidates is found in the Project's Strategic Opportunities Report, which identified eight clusters in the Region with a competitive edge and prospects for growth nationally. Second, it should conduct a survey of manufacturers in the region to identify leading innovators and exporters in the cluster, strengths and weaknesses in the support structure, and how the cluster links to markets beyond the Region. Third, it should recommend a short list of actions that appear to hold the greatest promise to supply missing links and strengthen connections through a stronger support structure. Walla Walla, Washington provides a good case study of a region

that has used a cluster development strategy as its cornerstone for economic development (<http://www.wvcc.edu/CMS/fileadmin/wine/DOCS/FinalReporttoCTED.pdf>). This region focused on strengthening its wine cluster as the principal engine for development. Their strategy has been recognized by the Economic Development Administration as being one of the best in the nation for cluster-based development.

3. ***Working with DEED and higher education, implement the Cluster Strategy in a least two clusters with focused efforts to recruit "missing links" in the cluster and/or foster new companies to fill voids.***

The Cluster Strategy, of course, must be more than a plan. The Region will have strong partners in moving it into action. The Minnesota Department of Employment and Economic Development support cluster-based development and has invested in helping train regions in its use (<http://www.deed.state.mn.us/lmi/publications/trends/0908/clusters.htm>). That said, there are no active cluster projects under way in Southern Minnesota. This initiative represents a great way to change that.

A solid goal would be to launch cluster strengthening activities in at least two clusters with strong manufacturing elements within 12 months. Implementation would include holding meetings across the targeted clusters, bolstering the organizations that support the clusters, and providing specific guidance to economic development practitioners on how their actions can support the cluster strategy. One of the biggest payoffs from a sound cluster strategy is that it can align development efforts. Thus, one outcome will be identifying critical "missing links" that economic developers at the county and state level can target in their business recruitment and retention efforts.

4. ***Create the Future Factories Program to bring together manufacturing, bioscience, and renewable energy leaders and identify new markets where the Region's manufacturing expertise could support the Region's opportunities, such as "pharmaceuticals."***

Many of the most exciting economic opportunities for Southern Minnesota lie at the nexus of manufacturing, bioscience, and renewable energy. Plant-made pharmaceuticals are a shining example, but far from the only one. The problem is that business leaders in renewable energy and bioscience are not fully acquainted with the industrial prowess in the Region that could advantage their growth, while factory managers often do not realize the significant new markets into which they might easily transition.

The Factories Futures Program would be the principal long-term initiative of the Forum. It would bring together leaders from

manufacturing, bioscience, renewable energy, and researchers to identify markets where the Region's factories could provide critical support. This program could initiate several activities. One would be attracting research dollars to the Region to explore further areas where key sectors intersect. Another would be to encourage joint ventures among companies in the Region where there is long-term promise. Yet another would be to work in tandem with the Southern Minnesota Equity Fund to identify markets where start-up firms might have significant market potential while unlocking new economic gains. In short, the Program aims to nurture emerging opportunities by enriching business networks in the Region, especially ones that span sectors that normally operate in isolation from others.

About the Center

The Center for Regional Competitiveness (CRC) is the coach expressly created to help regions pull together the pieces of a winning strategy.

The Center was formed in the fall of 2006 to provide the tools and analytics regions need to successfully compete in the global economy. The Center's vision grew out of recognition among experts that many, if not most, regions are ill-prepared for the global economic race. The Center is one of the nation's premier regional economic strategy organizations. Our approach is to balance world class regional analytics with dialogue within the region to both strengthen regional partnerships and to reveal critical economic assets.

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APPENDIX: A SUMMARY OF THE SOUTHERN MINNESOTA ECONOMIC GAME PLAN

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INNOVATION FORUM

ACTIVITY	TIMELINE	DELIVERABLE	MEASURE OF SUCCESS
Map the Region's current pipeline of innovation and its e-ship support organizations to help guide the Region's innovation initiatives.	6 months	Report to SMOR	Breadth & depth of engagement: Higher education, private, public, and nonprofit groups
Launch a new series of region-wide "awards" to lift up and celebrate innovation in schools, business, civil society & higher education.	6 months	Award events	Media coverage & share of region's population aware of the initiative
Design an <i>Innovation Institute</i> to foster innovation and entrepreneurship synergies, while connecting e-ship support across existing organizations.	9 months	Blueprint recommendations to SMOR	Approval & implementation by SMOR Media coverage
Identify the institutional steps & tax credits required to launch a new equity fund in the Region.	12 months	Recommendations to SMOR	Approval & implementation by SMOR Briefings to the region & policy officials
Open <i>The Southern Minnesota Innovation Institute</i> .	24 months	Dedication event. Start-up staff in place	Capital invested in the Institute Quality of staff attracted Media coverage Ongoing: number of new companies Patents issued Retention of high skill workers
Commence operations of <i>The Southern Minnesota Equity Fund</i>	24 months	Investment conference. Start-up staff in place	Size of fund at the outset Quality of staff attracted Media coverage Ongoing: Dollars invested in the Fund Number of companies funded Number & quality of jobs created by companies funded by the Fund Rate of return on funds invested

R E N E W A B L E E N E R G Y F O R U M

ACTIVITY	TIMELINE	DELIVERABLE	MEASURE OF SUCCESS
Create a <i>Southern Minnesota Renewable Energy Forum</i> to coordinate energy activities and foster synergies across the Region's diverse renewables assets.	3 months	Initial meeting Media announcement	Breath and level of participation by all energy businesses and associated groups in the Region.
Prepare a <i>Southern Minnesota Renewable Energy Regulatory Framework</i> to create the best possible conditions for the development of the Region's renewable energy assets.	9 months	Report to Governor and Legislature	Briefings with key staff from governor's office and legislature
Work with business schools in the Region to identify the best business models to develop wind and other renewable energy assets while maximizing wealth creation in the Region.	9 months	Report to SMOR	Approval & implementation by SMOR
Commission a <i>technical task force</i> from industry and universities to identify the best technical solution to the load fluctuations inherent in electricity generation from wind.	12 months	Report to SMOR	Approval & implementation by SMOR
Create the <i>Southern Minnesota Grid Plan</i> to connect the Region's electricity suppliers with the Twin Cities and other major markets.	12 months	Report to SMOR	Approval & implementation by SMOR
Launch the Southern Minnesota Energy Research Consortium, bringing together industry and university researchers to explore next generation energy opportunities in the Region and identify high potential research projects, such as algae and cellulosic ethanol.	12 months	R & D Conference	MOU forming the Consortium Dollars of funding support Number of business & university partners

M A N U F A C T U R I N G F O R U M

ACTIVITY	TIMELINE	DELIVERABLE	MEASURE OF SUCCESS
Form a <i>Southern Minnesota Manufacturing Forum</i> to focus industrial initiatives across the Region and foster synergies throughout the sector.	3 months	Initial meeting Media announcement	Breadth and level of business engagement University and education engagement
Build a <i>Southern Minnesota Cluster Strategy</i> to bolster the competitive strength of the Region’s factories, using the Project’s eight leading clusters as a starting point and focusing efforts on industries that fortify clusters (add missing links) while adding jobs that raise incomes.	6 months	Report & Recommendations	Approval by SMOR
Working with DEED and higher education, implement the <i>Cluster Strategy</i> in at least two clusters with focused efforts to recruit “missing links” in the cluster and/or foster new companies to fill voids.	12 months	Cluster meetings	New dollars invested Number & quality of jobs created Total manufacturing sales
Create a <i>Future Factories Program</i> to bring together manufacturing, bioscience, and renewable energy leaders to identify new markets where the Region’s manufacturing expertise could support the Region’s opportunities, such as “pharmaceuticals.”	18 months	Regional meetings Briefings to regional leaders	New research programs Dollars of business investment Number of new companies