INNOVATION AND ENTREPRENEURSHIP

A Case Study Prepared for Northern Illinois University's Executive Education Series

Regional Economic Development Leadership

Course PSPA 692: Innovation and Entrepreneurship

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February 2014

This report was prepared by Northern Illinois University's Center for Governmental Studies under award 06-79-05547 from the Economic Development Administration, U.S. Department of Commerce. The statements, findings, conclusions and recommendations are those of the author(s) and do not necessarily reflect the views, opinions, or policies of the Economic Development Administration or the U.S. Department of Commerce or the officers and/or trustees of Northern Illinois University.
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Introduction

We begin this white paper by acknowledging how easy it was for the Global Capital Group to accept the assignment of preparing this document. First and foremost, it sweetly falls within our core business interest which is business intelligence wrapped around activities to ramp up entrepreneurial action and assist clients accelerate innovative sustainable solutions. What a match made in heaven or so we thought. The region known as the State of Ingenuity (SOI) is a tremendous challenge even for an extremely optimistic transdisciplinary consulting firm.

The region is different from its neighboring regions and the six counties that border two very distinct states (regardless of Midwestern virtues) are very different. The differences are profoundly thick any way you care to travel. So what makes this project and this white paper interesting?

The answer lies in the fact that a unique opportunity has fallen in the lap of a group of economic development organizations, two regional universities, and a hand full of community colleges, political leaders, and corporations to come up with measurable strategies to attract investments via new companies, new products, and new industries. Entrepreneurship and innovation can be the one thing that will rally communities who basically have nothing in common but bad memories of a faltering regional economy tied to an even larger set of national economic misfortunes.

So, at the end of the day, why not posture to reach out and connect for a greater good. There is nothing to lose. What can be gained is an excitable future for coming generations who will benefit from regional leaders’ maximization of their influence and connections to come together and work collaboratively.

That’s not such a bad outcome. Nor is it a bad outcome if these efforts lead to transcending existing economic development models which can and will culminate in the creation of new jobs, new wealth, new firm formations, new idea and innovations, recognizable reduction in poverty and nihilism and a sustainable economy. This white paper is designed to set in motion a different peak from behind the usual curtain with the intent of showcasing something a little bolder and a little more off the beating path to consider. The Unités States is a nation top heavy with that way of thinking. We gladly add to that mystique with this document.
PART 1: Entrepreneurship Is the Practice of Freedom

A History of Competitive Leverage

America’s obsession with the entrepreneurial way of life can be traced as far back as the nation’s founding generation. A recognizable number of the 55 framers of the US Constitution and leading architects of our political order were entrepreneurs and are credited for putting our country on a road of entrepreneurial success. For instance, George Washington, the nation’s first President, owned an estate that was a prosperous industrial village (farm). Washington’s entrepreneurial portfolio consisted of a fishing operation, flour mill, and whiskey distillery. James Madison, the nation’s fourth President was not just a political revolutionary but the person who lead the initiative to finalize the Louisiana Purchase which doubled the size of the United States.

Benjamin Franklin was a recognized scientist, inventor, author, economist, and exceptional in other human endeavors. Franklin is viewed as one of the nation’s first **serial entrepreneurs**. He is credited with discovering the reality of electricity, inventing the lightning rod, inventing bifocals and publishing the *Poor Richard’s Almanac*. Alexander Hamilton established the Bank of New York and was widely known as a supporter of small businesses.

These Founding Fathers fought for our freedom as Americans but also fought for the right for Americans to have the freedom to become entrepreneurs. They laid the groundwork for entrepreneurship to be labeled as America’s secret weapon by Carl J. Schramm in his book *The Entrepreneurial Imperative*. As an American secret weapon, entrepreneurship is valued by Schramm more than basic manufacturing, technology, and even education. Entrepreneurship is what pushes the nation’s economy forward. He believes that entrepreneurship is America’s global advantage and extremely important for future generations.

**Behaving and Acting Like a Free Person**

Today, millions of Americans have taken the giant leap of faith and embraced entrepreneurship as a way of life. They have overcome great odds and obstacles to be creative and innovative with the intent of personal financial growth and career independence. Entrepreneurship in its purest form is a balancing act that is similar to an individual tightrope game. This so-called tightrope game promises no one they can enter the playing field safely and that the journey is without perils and failure. Statics have shown that 3 out of every 5 new ventures will fail before the 5th anniversary year of start-up. New entrepreneurs will have to overcome insurmountable odds like finding sufficient capital and customers, handling stiff competition, surviving unavoidable market realities (2008 Recession), possessing few networks, unskilled workforce pools, globalism, etc.
Yet, the truly ready find a way to side step life’s business challenges and perils in addition to their own box of self-imposed limitations and the ever-present continual mind in the fear factor syndrome. The American historical landscape is full of personal testimonies of individuals that have met failure only to pick themselves up and turn failure into personal success. Successful entrepreneurs stuck around when others walked away. They acted on their impulses and made it happen when others believed that it couldn’t be done.

For many entrepreneurs it has been a long journey from failure to prosperity. For others, it has simply been a personal commitment to their families and communities. Whatever the reasons and circumstances, Americans have been able to rally around a simple unifying entrepreneurial call. That is, entrepreneurship is the practice of freedom. This practice of freedom has seen a set of multivariate approaches to wealth creation.

These approaches serve as continual reminders that the practice of freedom comes with a few common threads. For instance, most entrepreneurs possess similar winning characteristics regardless if they’re in Silicon Valley or the State of Ingenuity (SOI). The truly successful have a laser like vision and focus. They see it before everyone else. They possess wide lenses and come equipped with needle eyes.

Not only do they see it and sense it they also strategically plan their entrepreneurial moves with calculating precision. Simply put, they strike at moment’s notice like a starving female Cheetah on the African Serengeti needing to desperately feed her young. Her moves are life and death opportunities. However, if she misses she is willing to plan another strike because others are depending on her success.

Entrepreneurs are keenly aware of what they bring to the dance. They know what they are good at, what they want, and what they want to pursue. Part of their inner six senses knows who they are and what makes them unique to their markets and communities. Entrepreneurs are confident people who are more interested in controlling their own destinies than having someone else do it for them.

Like founding generations before them in our great republic, today’s entrepreneurs are drawn to the marketplace by the call to serve. They operate on the principle that ‘service is the price for the air you breathe’.

Today’s entrepreneurs are passionately curious and demand huge amounts of data intake to feed their entrepreneurial desires. The information junky entrepreneurial “I got to be in the know culture” is fueled by an ever growing big data environment explosion. Entrepreneurs in the 21st Century thrive on chaos and require sophisticated business intelligence tools and access to databases that can assist them in growing their companies. The business intelligence tools and databases allow the passionately curious to remain vigilant with the most frequently used word in the entrepreneurship vocabulary - Why!
What Creates Wealth?

There are a number of elements that are needed for entrepreneurs to create wealth in addition to nurturing an environment for shared community prosperity. First, the region must be a safe enterprising ecosystem. Law enforcement is a recognized and appreciated presence. In safe regions, community leaders have established partnerships with law enforcement and the idea of community policing is a value in use. A safe region has a culture that has little to no tolerance for drugs, weapons misuse and violence. The ultimate goal in a region that prides itself on safety is measurable decreases in crime across the board.

Wealth is created in regions that invest in an educated workforce. An educated workforce is the byproduct of an educational infrastructure that is a strategic weapon. Leadership develops strategies that re-tip the scale with the intent of a measurable amount of brain gain as opposed to brain drain. A vital part of an ecosystem that prides itself on possessing an educated workforce is an environment that encourages its residents to speak other languages in addition to the national language. In other words, foreign exchange is as a way of life.

Places where new wealth and jobs are being created demonstrate a natural respect for education. Meaning, an educated workforce and respect for education are two sides of the same coin. In the competitive economic sweepstakes of regional winners and losers, it is no secret that regions with larger more talented workforces are more likely to thrive and survive than regions suffering severe brain loss.

Regions that are attractive to wealth creators heavily rely on education as an economic stimulus and not a deterrent. Not only is the value of respect for education seen as basic business sense but education is viewed as the best possible opportunity for the community’s future. Special attention is significantly paid to ensuring that young people respect the power of education and enterprise. In a previous document these kinds of places were referred to as brain hubs. In the brain hub schematic, education is seen as the gateway to individual and community prosperity.

Another major element of a wealth creation ecosystem is a diverse economy. Uniquely, the State of Ingenuity (SOI) has both an urban and a rural economy. Diverse economies signify that there are multiple forces at work that agglomerate, sustain, and even accelerate economic opportunities. However, these forces work better when industry clusters that are developed are the results of organic activities which build on the region’s strengths and are not the result of ill-conceived plans to replicate Silicon Valley or even Austin Texas. A diverse economy flourishes when regional leaders suspend the notion that if we build it they will come attitude but more on the vision that people help support what they help build.
Regardless if you think of the region through the prism of an innovation or brain hub, high marks on quality of life issues are usually reliable indicators of dynamic wealth creation ecosystems. Region wide community events, restoration and historic preservation projects, spacious and scenic parks and open spaces, downtown main street projects all rank high on the quality of life list. The SOI should do an inventory of not only its collective iconic landmarks and major points of emphasis but also inventory its unique innovative and creative spaces that provide sanctuary for the region’s creative class and future makers.

The truly flourishing regions put their entrepreneurs up on pedestals and widely celebrate their accomplishments. Entrepreneurial success is reported in varied media outlets and community venues. Simply put, entrepreneurs are treated like heroes.

Someone once said that a picture is worth a thousand words. Perhaps they were referring to the proposition that wealth creation ecosystems really can be the result of shared prosperity intentions. Very few individuals would openly admit that it is a bad thing if people don’t just survive they actually thrive. Whole communities are seen as democratic laboratories with real evidence that citizens are doing well. This type of region is high on the economic resilience chart because shared prosperity is not just some idea but a purposeful transformative reality.

Can the SOI become a reinvented region? The answer mainly lies in the fact that the region is virtually brand new and reinvention is a needed element to grow, attract, and sustain wealth requires much less organizational, political, social, cultural, economic, and psychological pull than well-established more complex regions.

Reinventions can jumpstart the paradigm shifts necessary to build the kind of environment for entrepreneurs to flourish. The newness of the SOI should be the passport for abrupt change. Enough smart eyes have put the region under the microscope over the past five years whereby the exercise of instituting different policies, actions, and demanding different outcomes that benefit the collective can and should be welcomed.

Another key element for entrepreneurial success is developing a regional support resources infrastructure that mitigates risks for new start-ups and help grow existing firms. The best possible portfolio for a robust entrepreneurial environment consists of:

- financial resources (money $$) via angel and venture capital investments
- mentoring services
- incubation
- acceleration
- access to powerful networks (being plugged in really does create wealth)
- access to information (what you know really can make you a lot of money), and
- access to smart people
Yet, at the end of the day, there is no element more important to the successful entrepreneur mix than the region abundantly being populated with visionary leadership. There are three responsibilities of visionary leaders. First, leaders must be creative. Second, leaders must be committed. Third, leaders must show courage.

**PART 2: Entrepreneurship Strategies**

*Revisiting the IC² Technopolis Wheel*

A re-visit (from a previous white paper) of the technopolis model suggest that if the SOI is serious about growing its bi-state six county set of opportunities SOI will need to develop a unified discipline for using science and technology to drive entrepreneurship and economic development outcomes for the region. This discipline is needed because the new economy fuels off new wealth and jobs and the proliferation of knowledge firms that attract smart talent and interested investors.

However, this discipline cannot and should not only be the responsibility of the partnering organizations that worked through the EDA grant but the entire ecosystem that the technopolis wheel demands. The wheel demands every sectorial leader to work across interdisciplinary tribal zones, sectors, political jurisdictions, state and county lines, and other more defined, more organized, and more resourced regions.

Another look at the technopolis wheel demands that the influencer role in the model be the dominate component of the wheel. We still live in an age where real people decide the fate of millions around the world. For the SOI, this means its existing and emerging leaders who represent large corporations, emerging companies, state government (both in Illinois and Wisconsin) federal government, local government, support groups, and the regions universities and colleges. At the end of day, leaders representing these industries will be and should be held accountable for jobs, prosperity, and an economically competitive region.
Blue Collar Workers in Transition

The region’s economic vulnerability due to the downturn in the U.S. automotive sector has caused a series of new approaches and strategies to offset the region’s unemployment and nihilism of auto workers severely impacted by massive layoffs and job losses. These once middle class factory workers are experiencing poverty and public assistance support in the form of food stamps. Community colleges like Blackhawk Technical College and Gateway Technical College re-tooled and beefed up their course offerings and degree programs in an attempt to give affected workers a fighting chance in America’s new economic reality of globalism.

One of these strategies has been to accelerate educational opportunities focused on getting factory workers back into the labor market in different sectors than the automotive industry. In her book *Classroom at the End of the ‘Line’: Assembly Workers at Midwest Community and Technical Colleges*, Sharon A. Kennedy discusses the enormous re-tooling on the part of Midwest community colleges to accommodate the educational needs of assembly line workers whose lives were shattered as a result of the Great Recession. Course work now focused on health care, advanced manufacturing and other fields that promised new professional opportunities.

While adequate for transitioning employees from one job to another more stable job in a growing field, these programs do not lend themselves to unleashing the entrepreneurial spirit. Current strategies place emphasis on getting back to work as opposed to taking a more leadership posture of establishing a new way of life that involves creating new opportunities for themselves and potential employees.

This white paper recommends that the SOI develop a transition planning set of programs aimed with the same level of outreach that was deployed toward displaced assembly line workers with the intentions of assisting them in enrolling and successfully completing course work that would lead them to entrepreneurial opportunities. Now, the focus should be directed at transitioning unemployed workers who are truly ready for self-employment to educational offerings that will cultivate and raise their awareness of the entrepreneurial spirit. Major components of this planning program consist of two primary engagement platforms.

The first platform is the **individual entrepreneurship action plan**. Each potential entrepreneur receives one-on-one counseling like students who enter regular educational programs. However, the purpose of the entrepreneurship action plan is to
really drive down into the entrepreneurship interest of students. The drill down process involves one-on-one counseling and serious discussions that lead to entrepreneurship career road mapping.

The second platform is an education and training platform. Here, students enter either into a regular curriculum offering schedule like students who entered fields like health care, computer science, etc. The entrepreneurship education and training platform should be designed to achieve greater acceleration in order to launch the potential entrepreneur right into the awaiting market action. This acceleration component should consist of no more than several weeks to 6 months of intense instruction. The regiment should also involve personalized activities close to the entrepreneurial idea and close to the market or markets the entrepreneur will be involved. The regiment can also be enhanced through webinar formats for efficient content delivery purposes.

**Entrepreneurial Revolution**

When Babson College professor Daniel Isenberg coined the phrase “how to start an entrepreneurial revolution” I believe that he actually meant “deciding that entrepreneurship is a new way of life can be revolutionary.” He sees his coinage as globally promoting what he calls the “big idea.” In his 2010 *Harvard Business Review* article Isenberg touts entrepreneurship as a uniquely American obsession that is spreading worldwide with impressive and cautionary results and implications. Surprisingly, war torn countries like Rwanda and Columbia have entered world markets with new ideas and products.

Isenberg’s entrepreneurial revolution comes complete with an exhaustive roadmap on how to get to the finish line (success) and the acknowledgement that there might be some challenges and pitfalls along the way. Yet, he stresses the importance of entrepreneurship to not only the economy but to culture and future possibilities. At end of the day, the revolution needs revolutionaries, meaning leaders. Like the role laid out in another white paper in terms of influencers (leaders), entrepreneurship ecosystems reflect the character, the values, the intelligence, the energy, the soul, and the commitment of its leadership that operate fluidly inside and outside their core sectors.
Most revolutions begin with a national, state, or local problem (in the case of the SOI two states comprising of six counties devastated by economic downturn in the auto industry). Isenberg offers up 9 prescriptions to address regional economic problems. They include:

1. Stop emulating Silicon Valley
2. Shape the ecosystem around local conditions
3. Engage the private sector from the start
4. Favor the high potentials
5. Get a big win on the boards
6. Tackle cultural change head-on
7. Stress the roots
8. Don’t over engineer clusters help them grow organically, and
9. Reform legal, bureaucratic and regulatory frameworks

Perhaps the most important prescription for SOI usage came in the way of sidebar success story on the country of Taiwan and how it was able to recruit expats back to its shores. A significant number of Taiwanese technology types begin leaving the country in droves to study and work abroad, especially in the U.S. and its innovation hubs like Silicon Valley. Then the Taiwanese government made a conscious effort to re-connect with these expats and offer them a chance to return to Taiwan and bring back their talent knowledge and know-how back home creating what Isenberg called forming a new human capital backbone in Taiwan’s IT industry.

Why is this important for the SOI? Because one of the main SOI issues discussed over the four year EDA grant period has been stop the noticeable brain drain that is taking place throughout the region. The Taiwanese model of structuring a purposeful outreach strategy to bring back its talent could serve as a guide for SOI leaders, especially the Mayors of Rockford, Illinois and Racine, Wisconsin, the regions two major urban centers. This same approach helped the Taiwanese government regain a foot hole in its science and technology industry that will impact the country’s entrepreneurship culture for generations to come.

While the aforementioned nine prescriptions can be catalytic to igniting entrepreneurial growth within the SOI region there is no strategy more potent than regaining lost talent that brings back new ideas and innovation which creates opportunities for regional growth and prosperity.
According to a 2009 study conducted by the Kauffman Foundation, white-owned businesses have on average more than $80,000 of start-up capital, while black-owned businesses have less than $30,000. While minority-owned businesses represent the fastest growing entrepreneurial group in the nation, the existing regional entrepreneurship ecosystems do very little to support them. The SOI region is no exception.

A 2012 study commissioned by the Illinois Small Business Development Center at Rock Valley College and the EIGERlab focusing on growth issues of black entrepreneurs in the Rockford, Illinois area revealed that most black entrepreneurs feel there is no level playing field when they compare support their white business counterparts receive to grow their businesses. Along with the Kauffman study this study points to three areas of needed support improvement for black entrepreneurs in the region as well as other minority entrepreneurs in the SOI.

Whether in the Racine/Kenosha or Rockford/Beloit areas, minority entrepreneurs need access to capital. The infusion of capital in a small minority business is the equivalent of an accident victim badly needing a blood transfusion during surgery. Without this needed source there is no coexistence.

Not only is traditional start-up capital illusive for minority entrepreneurs but next level financing in the form of angel and venture capital is also problematic. According to a fall 2013 Forbes article, nationally, minority entrepreneurs only made up 8.5% of the people pitching their businesses to investors in the first half of 2013. The article goes on to say that minority firms are less likely to receive angel and venture investments. The article concluded by stating the obvious - if you’re minority the investment scale is not tipping in your favor.

The second area that requires needed improvement to support the SOI’s small cast of minority entrepreneurs are strategic efforts designed to plug minority wealth creators into existing support infrastructure. The region has a respectable number of universities and colleges spread out among the six counties and striking distance outreach to major educational hubs in Madison, Milwaukee, and Chicago. Besides access to traditional curriculum offering these learning centers house units that specialize in business technical assistance and research.

State and local governments in the region have invested huge sums of financial resources to support the entrepreneurial spirit. Yet, these efforts are lack luster when it comes to growing and sustaining the region’s minority wealth creators. Current
regional efforts hideaway minority wealth potentiality in sub-sections of area chambers of commerce’s with little vision, focus, intent, and expectation for scaling up to have any real economic impact. Independent minority chamber efforts do little to change the game due to insufficient operating resources and interest within their own community of entrepreneurs.

The 2012 study endorsed by the Illinois Small Business Development Center at Rock Valley College suggested that Rockford’s black entrepreneurs want to establish relationships with the region’s larger corporations. Yet, to do so will mean several existing black firms will either have to partner with other black/and or other minority firms to add real value to the region’s larger corporations, or simply pursue another business altogether because their current business model does not fit a need that can remotely create a potential diverse supplier relationship with the region’s top companies.

Simply put, very few if any minority firms have real value added opportunities in the Rockford aerospace cluster. And, very few existing minority firms have a real chance of penetrating the emerging water cluster that focuses on the strategic location of Lake Michigan which runs alongside Racine and Kenosha Wisconsin.

The third and perhaps the most important needed area of support are connections and more connections. According to Dr. John Sibley Butler at the University of Texas at Austin who is among the foremost authorities on minority entrepreneurship and the former director of the Institute for Innovation, Creativity, and Capital suggest minority entrepreneurs need to develop deep networks of contacts. Minority entrepreneurs need to not only be at the table of influence but develop relationships with people who are at the table. A simple translation of what Dr. Butler is articulating means that minority entrepreneurs need to rub shoulders with wealthy people! Ironically, several black entrepreneurs interviewed as part of the 2012 study stated that being on boards and commissions where important steps toward growing their businesses.

**PART 3: The Science of Innovation**

“If there is a better way of doing it ------- find it.”

_Thomas Edison_

There are three distinct but interrelated movements that the author of this white paper believes will change the State of Ingenuity region. The **first movement** begins with a story of a banking family in 14th century Florence Italy. The Medici’s were known for their support of the city’s creative class. They supported sculptors, scientist, poets, philosophers, other financiers, painters and architects. By today’s standards the Medici’s were Florence’s early rendition of angel investors and venture capitalist. This banking family with their support infrastructure basically laid the groundwork for what scholars and historians have labeled as the Renaissance.
A contemporary look at the Medici’s showcase the enterprising dynamics of a powerful regional family who leveraged their wealth and influences to not only grow a region but set an entire continent on an economic dynasty that still is relevant today. They are profoundly highlighted in Frans Johansson’s book *The Medici Effect: What Elephants & Epidemics Can Teach Us about Innovation*. While Johansson brilliantly attributes this family and its influence on Florence and Europe’s economy and culture the larger takeaway from his book is a powerful set of prescriptions for unleashing innovation.

What was unique about Florence Italy was that it became the epicenter where creative explosions took place in addition to being a vibrant place for creativity. The city was a space without creative and innovative defined boundaries and limitations. Florence was a city where real entrepreneurial action took place and where individuals were able to exchange and combine their ideas and where real connections were made.

There are several lessons for the SOI that come out of the Florence Italy experience. First, interdisciplinary convergence upon community (region for the SOI) can produce economic windfalls. Second, it is important for a region’s innovators and creative types to break down barriers between disciplines and cultures and collaborate and learn from each other. Third, a new region based on new ideas can be forged if innovators, creative types, and the support infrastructures in place to support them work together.

The **second movement** comes by way of IC² Global Fellow Debra M. Amidon in here thought provoking work entitled, *The Innovation Superhighway*. As one of the globes’ most connected individuals, Debra reminds her readers that we’re just beginning to explore our environments beyond their limits. According to her, there are people all over the world that are coming up with good ideas and implementing them in an attempt to truly realize their value. Also, her research reminds us that the SOI should consider developing a regional value proposition that connects economics, behavior, and technology.

Debra defines innovation as the capacity to preserve the best of the old and realign the rest to take advantage of future opportunities. Debra believes that innovation is the result of leading and managing unique assets in addition to architecting the future. As a process, she defines innovation as theory to practice, seed to need, and cradle to grave. Debra also suggests that innovation is kaleidoscopic change that creates opportunities for the exchange of new ideas.
SOI can become empowered not through the multitude of Debra’s definitions and concepts but the takeaways that point toward global success and shared prosperity. Among these takeaways is the assertion that in order to truly grow a region large numbers of people have to develop an innovation mindset. The mindset derives from knowledge that is partnered with innovation for the purpose of being potent pathways to regional progress. Furthermore, knowledge has the power to create economic stability in a region. However, she reminds us that a real knowledge economy is dependent on how much knowledge is shared.

Regional growth takes place because there is something in the air that encourages risk taking. For Debra, culture is more important than economics and technology to a region’s success. Overall, her ideas regarding innovation posits around regional leaders realizing and acting on the fact that their leadership role requires them to be committed to creating **one whole community**.

Her challenge to the leadership in SOI is to determine what the region is, what the region wants and what the region will leave behind for future generations. No significant investments for the future can be made in the SOI until regional leaders do their due diligence and answer these very important questions.

The **third movement** is Social Physics. The idea of social physics can be traced all the way back to French philosopher August Comte (1798 - 1857) the founder of the discipline of sociology and the doctrine of positivism. Comte argued that as much as the physical world operates according to gravity and other absolute laws, so also does society. The connection between Comte’s works is grounded today in the so-called new science of social physics. This new science focuses on the flow of ideas between people and how the flow of ideas and information translates into change and behavior. Social physics can be defined in several different ways:

1. Disciplined networks
2. Orchestration and the co-creation of values
3. Exploiting opportunities through information that is open and available to everyone in the region and the world
4. Deployment of knowledge that creates wealth and grows value
5. The art of generating new ideas

Social physics suggest that it is possible for regions to flourish when there is evidence of a shared sense of purpose and people are connected who have shared beliefs. Shared beliefs are the result of ideas flowing from person to person and the spread of and combination of new ideas. Social physics allows for greater regional productivity, better decision making, finely tuned communication channels, and regional creative output.
Social physics reorders regional leadership responsibility by requiring leaders to help all stakeholders understand the importance of networks, how to collectively evaluate networks, and how to leverage networks. The movement has established a new language for leaders that are actualized in the following action verbs:

- Align
- Benchmark
- Design
- Develop
- Identify
- Implement
- Integrate
- Leverage
- Partner
- Plan
- Strategize
- Diversify

The reality in a robust social physics movement is that leaders help spring up, flow, and spread ideas. They are the first to demonstrate that collective action can solve unstructured problems. Leaders in a social physics movement are the first to create legitimate patterns of idea and information exchange. It is important for SOI leaders to provide platforms for individuals and organizations within the region to become prolific explorers of new ideas. Furthermore, leaders in robust social physics environments support diverse ideas and create opportunities for those diverse ideas to be widely spread.

**PART 4: 17 Innovations for the State of Ingenuity**

This section and the previous section owe a great deal of debt to the Global Fellows network of the Institute for Innovation, Creativity, and Capital (IC²) at the University of Texas at Austin. The Global Fellows are the intellectual center of the Institute’s transdisciplinary “Think and Do” tank. The following innovations come from their annual meeting held in Austin, Texas in April of 2013 that focused on digital clusters and wealth creation and the impact of social physics. The following innovations are ideas from scholars and experts in fields like econometrics, marketing, business strategy, regional economic development, operations research, organization behavior, technology transfer and commercialization, creative and innovative management, alliance building, and entrepreneurship.
**Idea # 1 Study Networks**
Create a regional culture that understands the importance of studying networks.

**Idea # 2 Create a big regional lens**
- Look at the region comprehensively
- Look at the enterprises in the region
- Look at the region’s money deals
- Look at large corporations in the region in terms of their money deals
- Look at the region’s young growth companies and the key individuals who lead them and who their investors are
- Track the flow of information

**Idea # 3 Measure the strengths of network connections**
- Understand what gets measured matters
- Use contemporary measurement tools (e-mail, Skype, telephone calls, Meet-up, Facebook, etc.)
- Measure everything you do in the SOI
- Measure the networks that create wealth, opportunities, and jobs
- Measure innovation
- Measure the impact of transformative coalitions in the region’s innovation ecosystem
- Measure and track regional actors and events

**Idea # 4 Map the social networks of the region**
- Operate with the understanding that a picture is worth a thousand words
- Map everything the region does
- Map the relationships in the region
- Map the connections in the region
- Map the connecting opportunities
- Map where the financial and technical resources are located and can be assessed
- Map where the creative spaces are located

**Idea # 5 Pay Attention**
Pay attention to social management of creativity and innovation

**Idea # 6 Look for promising international opportunities**
- Re-think Africa as a new emerging market
- Look at Africa’s needs like education and training
- Connect with Africa on the enterprise side of the ledger in terms of training entrepreneurs how to penetrate global markets
- Partner with other efforts looking to achieve similar goals
Idea # 7 Promote entrepreneurship as a regional life skill

Idea # 8 Develop a regional applied economic research platform
- Tell stories about regional economic development challenges, success, and opportunities
- Conduct economic impact studies
- Develop case studies about successful regional businesses
- Conduct regional surveys of minority businesses
- Research minority businesses barriers to growth and sustainability
- Research minority businesses challenges in participating in identified regional growth industries
- Mine the data to determine how to make minority businesses successful
- Get regional actors active around the data on minority businesses

Idea # 9 Develop a regional chronology for the SOI
- The chronology should be formatted on a linear scale diagram
  - High talent acquisition periods
  - Technology that changed the regional game
  - Capital movements over time and their current maturity status

Idea # 10 Prepare innovation ecosystem leaders for their role responsibilities
- Train lawyers and accountants to work with start-ups
- Train public administrators to support an innovation ecosystem
- Train non-profit leaders how to position themselves as value added players in the innovation ecosystem
- Train business leaders the advantages of enlarging their corporate square footage to advance regional shared prosperity
- Train education leaders how to position their institutions as economic development firms and hubs for entrepreneurial ideas
- Make tech transfer and commercialization a community wide understanding

Idea # 11 Create an initial pilot regional innovation dialogue
Use the dialogue to discuss developing a regional innovation index that is centric to the region yet has the pieces like the index developed by the Kauffman Foundation

Idea # 12 Develop a legitimate regional innovation shared vision
- Admit the truth that the region does not have a shared vision
- Identify a potential magnet that might assist the region in creating one
- Develop a jazz band mentality that will allow everyone to participate
- Ensure that participation is fluid and often
- Maintain the agility of connected and active people
- Keep things fresh and exciting
- Cultivate ideas from the bottom of the pyramid
Idea # 13 Redesign existing facilities and create Deal Flow Centers
- Train regional leaders to assist entrepreneurs in preparing and readying their ideas for investor interest
- Create spaces for potential investors to co-mingle with the region’s innovators and creative types

Idea # 14 Develop regional fiscal policies that will reward businesses for investing in the innovation ecosystem
- Remove existing dis-incentives
- Have a regional understanding among all actors that the economy is driven by businesses

Idea # 15 Increase the region’s Angel Investor Infrastructure
- Work with the angel investment community to convert their resources into SMART MONEY
- Really pick their brains in terms of what they’re really looking to invest in
- Lure top scholars from other regions

Idea # 16 Deploy the power of people on the region’s complex problems
- Develop a process to tackle the problems
- Study the problems by holding workshops and conferences
- Capture the innovations that comes out of the workshops and conferences
- Act on the innovations

Idea # 17 Develop learning platforms that teaches regional citizens how to navigate the Technopolis Model
- Teach citizens how knowledge grows regional value
- Teach citizens how relationships and connectivity grows regional value
- Teach citizens how collaboration grows regional value
PART 5: Conclusion

It was mentioned early on in this white paper that a major U.S. strategic advantage is entrepreneurship. Entrepreneurship is the process and activity that creates wealth and jobs in our economy and around the world. The men and women who become entrepreneurs instigate change, demonstrate tenacity, are beacons of hope and inspiration, and power the spirit of greatness. As leaders move the State of Ingenuity (SOI) forward, increasing emphasis will need to be placed on unleashing the region’s entrepreneurial spirit.

Individuals in the region who have an interest in entrepreneurship, from displaced auto factory worker to minorities in the region’s urban and rural areas, students at colleges and universities in the SOI, should find a region that is positioned to support and encourage their willingness to dare to be different. In order to minimize the squabbling over a consolidated definition of entrepreneurship, the following definition is provided:

“Anyone who perceives an idea, uses that idea to pursue an opportunity, and creates and grows a firm to pursue it.”

This brings me to the next big ticket item – innovation. I am reminded of a presentation I witnessed on the campus of the University of Texas at Austin in the spring of 1995. I was one of 13 scholars who presented ideas on immigrant entrepreneurial activities in the U.S. However, the most compelling presentation during the day long set of discussions was delivered by a Pakistani immigrant who owned a printing business in Austin. He immigrated to the U.S. without a job and most of his family only had the shirts on their backs when they arrived at the airport in Austin. But what they did have traveling with them is a mindset that has allowed them to not only live out the American Dream but set the bar for how to leverage innovation.

Their immigrant mindset is deeply rooted in their Ismailia Islamic religion that teaches them that business failure is not an option and that if you don’t manage your future someone else will do it for you. Simply put, innovate or evaporate! Leaders in the SOI will need to manage the future of the region. And, failing to do so is not an option. There will always be external pressure from Madison, Milwaukee, and Chicago. However, working together as one region can and will position the region for economic growth and shared prosperity.

This brings me to my last concluding point. The primary tone of this white paper has been the advocacy of collaboration. Collaboration requires a different language adoption from regional leaders along with a comprehensive paradigm shift from behaving independently opportunistically. Two states and six counties cannot move forward pursuing their immediate self-interest with little or no regard for the collective consequences.

The new way of thinking and acting will need to be visible actions and behaviors of leaders developing opportunistic strategies that take into account a legitimate regional
shared vision. Actions moving forward cannot be dismissive of cooperative norms. Regional leaders will need to emphasize joint actions and activities in addition to emphasizing shared goals across the SOI.

**Bibliography**


