

Peoria NEXT: Collaboration for the Future

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Abstract

This is a story of managing change and the attempts of a conservative Midwestern community to enter the new knowledge-based economy. It tells of a community with a rich past but an uncertain future. Uncertain in its ability to embrace the spirit and power of collaboration, Peoria NEXT is a collaborative organization formed to transform a regional economic culture from one reliant on heavy industrial manufacturing to one focused on discovery, innovation, and commercialization of locally generated intellectual property.

Peoria NEXT is a collaborative organization comprised of public and private educational institutions, a federal laboratory, a corporate research and development facility, several hospitals, and business and civic leadership. As its name implies, the intention of Peoria NEXT is to influence the future of its community. The goal of the organization is to improve the educational, social, economic, and physical well being of the Peoria region through expansion and diversification of the economic base. Implementing the continuum of discovery, innovation, and commercialization of regionally generated intellectual property is the strategy to reach the goal.

Economic and Social History of Peoria

One must take into account the economic history of Peoria to understand the purpose of Peoria NEXT. At its beginning as a French trading site, Peoria's economic vitality was intimately connected to its proximity to the Illinois River and the surrounding rich agricultural assets. Throughout the nineteenth and early twentieth centuries, production, processing, and export of agricultural products dominated Peoria's economy. Industries such as meatpacking, foundries, farm machinery manufacturing, and the distilling of grain products dominated. Between 1837 and 1919, as home to 24 breweries and 73 distilleries, Peoria boasted the claim of "The Whiskey Making Capital of the World." With the advent of prohibition and the downturn of the agricultural economy, Peoria's fortunes began to wane. Another defining moment was on the horizon and rapidly moving to impact the nature of Peoria's economy.

In the early twentieth century, Mr. Benjamin Holt made the decision to move his tractor manufacturing operations from California to the Illinois Heartland to be nearer the farming industry. In 1925, the Holt Company merged with the Best Tractor Company to form Caterpillar Tractor Company, a company focused more on

earthmoving capabilities than routine farming applications. The local economy thrived on the back of Caterpillar and its supply chain to the point that Peoria took on a persona of economic invincibility until the global recession of the early 1980s took effect. Caterpillar struggled to sell products and Peoria began to experience a shaken confidence in its ability to withstand the storm.

As the economy rebounded in the late 1980s and early 1990s, so did Caterpillar; but this rebound, from the Peoria perspective, was being affected by new challenges. The necessary globalization of Caterpillar's business strategies, the competitive nature of offshore producers, the cost advantage of non-union workforces, the acceleration of technological change, and the demographic change of an aging Caterpillar workforce led to profound regional job loss. A significant series of questions are now being discussed in the community. What are the regional resources, what are the strengths, and whence will come the leadership necessary to lead the community and region into the new economy?

Early Development Process. Peoria NEXT began as a small initiative in the summer of 2000. Its beginnings were rooted in an unfunded mandate by the leadership of the University of Illinois at Chicago College of Medicine (UICCOM) to increase research activity for faculty and students at the University of Illinois College of Medicine at Peoria (UICOMP), a regional campus of the UICCOM. Responding to that mandate, the administration and faculty of UICOMP engaged in the process of constructing a new vision for the College of Medicine. The purpose of that new vision was to create a place of realized potential as eloquently described by Max Depree (1997) in *Leading without Power*. The new vision held up the necessity of collaboration as one of its guiding tenets and expanded the focus of what had been primarily a clinically oriented medical school to one with research on equal footing. As such, the initial focus on expanded clinical research became the driving force to the precursor of Peoria NEXT, the Peoria Regional BioCollaborative.

Benchmarking research led to the discovery of a model in Kansas City, Missouri that fostered interinstitutional collaborative research as an economic development tool. Civic, healthcare, and educational leaders of Peoria visited some of the participants in that model. Upon returning home, dialogue on a local variant of that model began. A steering committee was convened through the fall of 2000 to broaden the perspective. Leaders from Bradley University (BU), Illinois Central College (ICC), and the USDA National Center for Agricultural Utilization Research (USDA NCAUR) joined with healthcare leaders to investigate Peoria's approach to a collaborative research program. It was decided that an outside consultant should be engaged to develop a strategic plan for expansion of "bioscience research" in the community.

The Technology Partnership Practice of Battelle Memorial Institute was commissioned in the spring of 2001 to produce the plan in collaboration with the steering committee. Seven tasks were undertaken over six months, including: a core focus identification; an economic analysis; a benchmarking analysis; an inventory and gap analysis; an

analysis of the local strengths, weaknesses, opportunities, and threats (SWOT); development of strategies; and development of an implementation plan. Such actions were a new experience for a community reliant on heavy industrial manufacturing and its supply chain.

On the morning of September 11, 2001 at 7:30 a.m. (CDT), over 300 civic, corporate, educational, and research leaders were gathered to hear the final report of Battelle's study and recommendations (Battelle Memorial Institute 2001). Five principal strategies with 29 action items were presented. Excitement was building throughout the community, as evidenced by the large attendance at the meeting. Little was it known that at 7:46 a.m. (CDT) the world had changed. Around 8:25 a.m. cell phones began to alert those in attendance of the attack on the United States. Community conversations about the plan were rejoiner later in the fall despite the uncertainty of the world situation.

Momentum was rekindled early in January 2002 when the executive leadership of Caterpillar Inc. began to see the vision for a new economy in Peoria and just how their company might play a role. This action necessitated broadening the scope of what was then referred to as the Peoria Regional BioCollaborative to include engineering technology and materials science technology research and development. The action yielded the vast resources, energy, and expertise of the Caterpillar Technical Services Division (TSD) employees, the company's research and development division. A new more inclusive vision for the future of Peoria was formulated and shared with the community.

This new vision took stock of the many local assets in place to provide leadership, resources, and strengths for Peoria's play in the new economy. What began as the Peoria Regional BioCollaborative, was growing into something much larger. The name was no longer descriptive of the organization or its goals. Three local marketing firms volunteered in a collaborative effort to develop an appropriate new name. Numerous ideas were developed but the one that rose quickly to the top aligned itself with the next Peoria, one that signaled to the community it must move forward into the new economy or be left in the dust and rust of the old ways. Accordingly, the collaboration was renamed Peoria NEXT.

Motivation for the new collaboration thus came from not only the need to expand research but also the need to diversify the community economic base. The expanded focus required a broad understanding of the attributes of the new economy: globalization, an accelerated pace of change, a knowledge base and networking (*Planning Local Economic Development by Blakely and Bradshaw*). Introducing the concept of a new economy to a conservative mid-western community and region that has been so reliant on heavy industrial manufacturing and its supply chain poses a sizeable leadership challenge.

Member Organizations

Peoria NEXT is a unique public/private partnership of healthcare, education, research and business institutions focused on discovery, innovation of the discoveries, and commercialization of those innovations. Member organizations represent community leadership from several economic sectors:

- Healthcare: UICOMP, OSF Saint Francis Medical Center, Methodist Medical Center, Proctor Hospital
- Education: BU, ICC, Peoria Public Schools District 150
- Research and Development: USDA NCAUR, Caterpillar TSD
- Commercialization: Biotechnology Research and Development Corporation (BRDC), Turner Center for Entrepreneurship in the Foster College of Business Administration at Bradley University; Heartland Illinois Technology Enterprise Center (HITEC)
- Business: National City Bank, Ameren CILCO, Economic Development Council for Central Illinois, Peoria Area Chamber of Commerce

UICOMP opened in 1970 to be a catalyst for the development of an academic medical center in downstate Illinois. It was intended to fix a physician shortage in the state and respond to a historical paradigm of Illinois being a large exporter of physicians to the rest of the United States. Coupled with the significant clinical infrastructure resulting from large investments by three private hospitals within the community, UICOMP has well fulfilled the educational and service missions of the University of Illinois.

UICOMP is home to 150 medical students and 200 resident physicians and has produced 1015 new physicians since 1972 of which 510 have remained in Illinois and 317 have remained in the immediate central Illinois region. In short, UICOMP has been successful in producing doctors for Illinois.

However, efforts in research and economic development, the remaining two missions of the university, have fallen short of their potential. To that end, a mandate was handed down from the leadership of the College of Medicine to join in renewed efforts with Chicago to strengthen the COM's position as a national leader in medical research. This mandate was issued without additional financial resources and, as has turned out over the past three years, with declining resources. In searching for opportunities to expand research options for UICOMP, it became apparent that collaborative efforts with community assets such as the USDA NCAUR, Bradley University, and Caterpillar Inc. Technical Services Division should be explored.

That which makes Peoria NEXT unique when benchmarked against other communities is the presence of the USDA NCAUR and the Caterpillar TSD. These two entities provide over 250 Ph.D. scientists and engineers, are responsible for over 200 patents annually and R & D expenditures that exceed \$700 million. The spectrum of K-12 public education through post-graduate professional education is also represented within Peoria NEXT.

It is the belief of the Peoria NEXT leadership that if our culture is to be transformed, not only do we have to impact the cultures of the anchor organizations as they exist today, but also the leadership of tomorrow in the persons of current school children. This focus on the public schools has dual purpose in that it is an urban school system that is struggling with the ravages of inner city decay, poverty, and abandonment by the consequences of suburban sprawl. Peoria NEXT holds conferences on science and technology for educators and brings research scientists and technologists from the anchor organizations into the public schools to interact with students.

Further in line along the educational continuum represented by Peoria NEXT is ICC, a two-year community college. This institution plays the vital role of technical education with a focus on healthcare and agricultural and industrial technologies. Currently ICC enrolls approximately 13,000 students in programs for credit along with several thousand students in non-credit classes. As Peoria moves to embrace the new economy with its large science, technology and engineering faculty component, technician support jobs take on an even greater importance. ICC also plays a vital role in retraining workers for jobs that have taken on a new complexity with the development of computerized manufacturing processes. ICC links well with the public schools as the message to the community becomes clearer that K-12 education is but preparatory for some additional form of training or education necessary to enter the work force. Many Peorians had the luxury of viewing a high school diploma as a terminal degree in that it assured the graduate of life-long employment and security at Caterpillar, but that is no longer the case. Inculcating this new educational paradigm into the community culture poses a sizeable challenge.

Bradley University provides the community with a high-ranking Carnegie Master's Level II institution. Approximately 5000 undergraduate and 1000 graduate students are enrolled at BU annually. The Foster College of Business Administration, the College of Engineering, and the science faculty of the College of Liberal Arts and Science from BU all contribute to the science and technology leadership of Peoria NEXT.

Technology commercialization activities have been apparent on several fronts in Peoria. Prior to the passage of the Bayh-Dole Act, there was no legal way to commercialize technologies discovered and/or innovated at the USDA NCAUR. In the mid 1980's, Congressman Robert Michel, from the 18th congressional district of Illinois, was successful in shepherding federal legislation that opened the door to technology commercialization from the NCAUR. Out of that effort, the Biotechnology Research and Development Corporation was formed under the leadership and guidance of the economic development group of the then Central Illinois Light Company (CILCO, now Ameren CILCO).

The strategy of BRDC is to link the federal government, academia and the private sector together in close working relationships for the development of new commercial products and businesses. BRDC does not conduct research or employ its own scientific staff. Rather, it utilizes a pool of dollars from governmental grants, shareholder

contributions and licensing income to seek out and fund research programs of interest to its shareholder companies. The focus of BRDC is on research with true commercial potential—all within the general research areas of animal healthcare, plant sciences, biocatalysis and materials science.

A state of Illinois funded program, the Heartland Illinois Technology Enterprise Center also plays a role in partnership with the Economic Development Council of Illinois for new business development. The Peoria Area Chamber of Commerce is responsible for developing entrepreneurial networks in support of the commercialization process. National City Bank and Ameren CILCO also provide civic leadership in technology commercialization through capital procurement and business consultation.

Role of Collaboration

The role of collaboration in Peoria NEXT has arisen out of both intention and necessity. If one accepts that the new economy revolution is upon us and that it is built upon a platform of intellectual capital, then collaboration is essential. Knowledge development is not a zero sum game and, in fact, often grows with use. This economic revolution changes many basic theories of economic wealth generating potential. Rather than possession of large quantities of scarce resources as a means to wealth generation, the possession of large quantities of an abundant resource, knowledge or those that can generate knowledge, is key to economic improvement. Wealth generation potential in the new economy is also built upon networking. As no one person can possess all knowledge, the more people one knows through personal networks, the greater one's wealth generating potential. It is thus by intention that Peoria NEXT actions are built around collaboration.

Productivity is also enhanced by collaboration as reported in *No Contest, The Case Against Competition* by Alfie Kohn (1992). Such a consideration flies directly in the face of corporate America. Often companies must expend extreme amounts of energy and resources to protect valuable intellectual capital and work to keep those prime producers of intellectual capital, their science and technology R&D staff. Yet to stifle the creative talents of scientists and engineers for short term gain often results in long-term loss of both intellectual property generation and generators. Healthcare institutional competition is often mandated by federal rules, yet many of the providers live in oligopoly markets that in turn restrict competition.

Our initial pursuit of the goals of Peoria NEXT involved collaboration in medical research among the healthcare anchors of Peoria, but due to an extremely competitive service environment, efforts to reach that goal have fallen short to date. As with many communities and organizations today, especially state universities, being asked to do more with less is becoming a norm. As evidenced by UICOMP's unfunded mandate to expand research activities and opportunities for students and faculty, collaboration is a necessity. To ignore the use of non-traditional research resources such as the USDA NCAUR for microbiology and/or molecular biology research would be shortsighted. To ignore the resources of the CAT TSD and the Bradley University College of

Engineering for biomedical engineering collaborations or medical robotics collaborations would be shortsighted. To ignore collaborative research opportunities between the Bradley University Biology Department, Chemistry Department and the UICOMP Department of Biomedical and Therapeutic Science would be shortsighted.

Cultural Interactions/Conflicts

Volunteer organizations have leadership challenges. More significant leadership challenges arise when volunteers are from diverse organizational cultures. Peoria NEXT is a volunteer organization where the culture of a large public university bureaucracy is attempting to work with the cultures of a private university, a very successful Fortune 100 corporate culture, a public community college culture, and a federal research laboratory culture for research and educational programs. It is an organization attempting to meld the academic culture with the business culture to develop a seamless pathway for new business start-up.

At first pass, the UICOMP and BU cultures would seem to have similarities in their academic missions, and indeed they do. Yet, layers of bureaucracy and complex decision-making structures inherent in the public university are arduously slow and may clash with somewhat streamlined processes inside a private university. Speed of decision-making in the corporate culture is much faster, measured by a completely different set of economic parameters, and may come in conflict with the academic world. A federal national laboratory that has its missions and mandates established by the bureaucracy of the Department of Agriculture has little room to engage new and different ways of thinking and acting. What has enabled the Peoria NEXT collaboration to develop is that which makes all successful collaborations function, relationships between people.

Upon becoming immersed in the various cultures mentioned one realizes that although the espoused cultures may differ, the people carrying out the missions of the organizations are very similar. If those people possess the ability to see beyond the current and into the future, cultural barriers begin to evaporate. Collaborative relationships are being developed between the science faculty of Bradley, the basic science faculty of UICOMP, and scientists from the NCAUR. Collaborative relationships are being developed between the engineering faculty of the CAT TSD, Bradley's College of Engineering, and clinical faculty of UICOMP. Collaborative relationships are being developed between the Turner Center for Entrepreneurship, faculty of the Foster College of Business Administration, the technology development groups of CAT, HITEC, and the Economic Development Council of Central Illinois. Collaborative relationships are also growing between faculty and staff of ICC, Bradley's College of Education, and Peoria Public Schools science and technology faculty. It is an explicit goal of Peoria NEXT to assemble all its educational, research, innovation, and commercialization faculties into a virtual research university that brings discovery to the marketplace.

Community Involvement

As the Battelle study was getting underway, Peoria elected new mayoral leadership. This mayor is visionary in his approach to government and embraces the notion of the new economy. He is leading the city and regional dialogue on change through a collaborative effort called Vision 2020. Foci for this activity include government efficiencies, educational needs, and other economic drivers such as transportation and tourism. Historically, each of the five anchor organizations, UICOMP, BU, ICC, USDA NCAUR, and CAT TSD has been encased in a so-called silo mentality. As this community comes to understand the importance of networking and leveraging its outstanding existing assets for entry into the new economy, it has begun to realize the necessity of knocking holes in those silos.

John Kotter (1996) points out in his work, *Leading Change*, one of the major errors leading to the failure of change initiatives is under-communicating the vision. To that end, the community has been engaged over 200 times in sessions with invited small groups, civic and fraternal clubs, and various other forums to engage in dialogue on the vision for Peoria NEXT, and many more are being planned. One interesting observation to date is for this change phenomenon to be understood by the average citizen, he/she must be part of the dialogue at least five times. A sense of urgency that something must be done to diversify the economy of the Peoria region, another of Kotter's recommendations for successful change, is occurring. The manufacturing job loss in Peoria and Illinois has been significant over the past ten years, and the rate of decline seems to be increasing. On one benchmarking visit, the civic leadership of Kalamazoo, Michigan shared that, in their experience, the primary driver of change is not a new or great idea, but rather a crisis. In the minds of many Peoria leaders, a crisis is looming.

Benchmarking Activities

Benchmarking activities in the spring and summer of 2001 were focused on communities and regions with somewhat similar demographics. Included were Iowa City, Iowa; Kansas City, Missouri; Rochester, Minnesota; Greensboro, North Carolina; Omaha, Nebraska; and Norfolk, Virginia. Subsequent trips have been taken to Louisville, Kentucky; Indianapolis, Indiana; and Madison, Wisconsin; all communities with vibrant growth strategies. The principal lesson learned from all these communities was the absolute necessity of a clearly articulated and widely held vision for the future.

Common key elements that have been identified include engaged universities, intensive networking, available capital, discretionary research and development funding, workforce development/talent, and patience coupled with a long-term perspective. Most of the keys are well represented by various existing community assets. The question remains whether the assets can relate to one another in new and different ways so that the sum is greater than its parts. One can apply the eloquent writing of William Shakespeare in his lines from *Julius Caesar*, to the future of Peoria: There is a

tide in the affairs of men, which taken at the flood, leads on to fortune; Omitted, all the voyage of their life is bound in shallows and in miseries. On such a full sea are we now afloat; and we must take the current when it serves or lose our ventures.

Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

The results of a SWOT analysis, to identify strengths, weaknesses, opportunities and threats generated the following information.

Strengths:

- Strong healthcare sector
- Long history of agricultural production and processing
- Cost competitive business climate
- New and emerging community leadership
- Number of anchors on which to build a bioscience sector economy
- Very strong quality of life base with large city amenities coupled with a small town feel and culture
- Existing community wealth

Weaknesses:

- R & D base that is not growing at the rate of other regions
- Lack of critical mass of bioscience-related firms
- Static population growth
- Lack of an entrepreneurial infrastructure
- Lack of involvement, historically by many of the anchor institutions, in the community's efforts to address economic issues
- Limited history of sustained collaboration among the healthcare anchors in the region
- Lack of flexibility and freedom of action for UICOMP inside the University of Illinois system
- Fractured community and regional leadership
- Focus of the economic development activities on business retention with little attention to technology business recruitment and entrepreneurship

Opportunities:

- Build on community history of agricultural bioprocessing
- Build on region's healthcare reputation
- Build collaborative relationships leading to research expansion in areas of region's existing core competencies
- Bridge start-up business activity with region's R & D strengths
- Use gold standard of "Will it play in Peoria?" for national branding campaign
- Develop coalition of regional elected officials to provide state and federal investments in Peoria future
- Utilize bioscience initiative as catalyst for new economic development strategy
- Utilize bioscience strategy to attract and recruit new talent to the region

Threats:

- Other regions have similar aspirations
- Other regions' aspirations may adversely affect healthcare industry market penetration
- Other regions have stronger infrastructure
- Other regions have developed mechanisms and approaches to attract bioscience firms
- Stable population base could adversely affect state attention to initiative
- Inability to organize, convene, and mobilize the community's leaders to implement the strategies

Strategies:

Five strategies were built to give direction to the strategic plan of moving to the next Peoria:

- Strengthen the region's base of research and innovation by increasing collaboration among key local entities with research and development capability
- Further develop the region's technology infrastructure in support of creating a critical mass of science and technology-based industry and jobs
- Cultivate a local entrepreneurial culture that will nurture the establishment of more science and technology-based businesses
- Establish a regional business climate that supports development in the area of life science, materials science and engineering science
- Mobilize community and regional support for science and technology-based economic development in the areas of life science, material science and engineering science.

Twenty-nine action items were developed to implement the strategies. With each strategy, action items are targeted either to address a demonstrated weakness or capitalize on a revealed opportunity. Items being enacted include inter-institutional research programs, establishment of a medical and technology district within the city of Peoria, planning for a science and technology business incubator inside the district, housing inside the incubator a technology commercialization center, establishing an Internet2 local research network, constructing a virtual research university among the collaborative anchors, and developing a marketing campaign to mobilize community, regional, and state support.

Resources

To begin a research, educational and economic development initiative aimed at transforming a culture to enter a new economic revolution in the teeth of a significant national recession, that is even more significant at the state and local level, is poor timing in the view of some. In the view of Peoria NEXT leaders, it is an ideal time to discern those committed to the future of Peoria and those standing on the sidelines watching the parade pass by. Efforts to fund the organization have a local, a state and a national scope. Locally, the start-up efforts have been greatly aided by an anonymous angel donor, one who sees and has enrolled in the vision of Peoria NEXT. This benefactor's initial contribution placed the early operating budget in good stead and

has also allowed for the formation of a local seed research fund. Member organizations have also devised a local “dues” structure allowing for sustainability of the organization over the next three to five years. In benchmarking communities and regions that have successfully entered the new economy, their state governments have made significant investments in the infrastructure necessary to compete. While funding requests to the State of Illinois Department of Commerce and Economic Opportunity are in the queue, the nature of Illinois’ commitment to regions other than Chicago is yet to be seen. Federal funds have been and are being sought through both grants and appropriations. A successful application to the National Science Foundation Partnership for Innovation has recently been announced. Federal appropriations to the organization and specific members have been recently gathered but on an order of magnitude significantly small by other regional standards. Attracting early stage Venture Capital (VC) money to assist with start-up funding has been an important endeavor for the community. There has been a significant void of investment capital in the region, but Peoria NEXT is beginning to attract the attention of the early stage venture capital community. Also, a local Angel Fund has been started with a target to raise \$2 million for local investment in start-up companies.

Results

Leadership for the organization comes from a volunteer board of directors with representatives from each of the member organizations. Commitment to the view that Peoria NEXT is an economic and educational force for molding the future of the community is evidenced by the fact that their CEO’s represent each of the member organizations. Leadership for implementing the strategies through the action items has been assigned to a volunteer group known as the Implementation Team (I Team). The I Team tasks have been broken down into the following work teams: Business Team, Marketing/Communication Team, Information Technology Team (IT Team), Research/Education/Innovation Team (REITeam) and the Red Carpet Team. A Managing Director, the only part-time paid employee, is contracted from UICOMP.

The Business Team’s primary goal is to assist with the commercialization of locally generated intellectual property. The role and scope of the Business Team has been developed via a contractual relationship with the local Economic Development Council of Central Illinois. This contract provides for full-time leadership and staff support for such duties as new business start-up activities, business recruitment, entrepreneurial networking, and the development of a new technology business incubator. An important additional duty for the Business Team is coordination of the aforementioned with other entities in the community that provide portions of these services.

Bradley University has a newly created, endowed center for entrepreneurial education and service inside the Foster College of Business Administration. The Robert and Carolyn Turner Center for Entrepreneurship provides small business development assistance, international trade assistance, e-Business consultation and numerous educational programs. Bradley University also hosts the Heartland Illinois Technology Enterprise Center (HITEC), a state-funded commercialization assistance center. Since

the inception of Peoria NEXT, three new start-up businesses have been formed from commercialization of locally generated intellectual property and several more are in various stages of formation.

Telling the Peoria NEXT story to the community, region, state and nation is the job of the Marketing/Communication Team. This job is made complex by the numerous and diverse target audiences for the message, including scientists and researchers, educators trying to engage students in the new economy, new business start-ups seeking a home, entrepreneurs seeking their next business, venture capital firms looking for investments, civic leaders needing the information to assist with the change of a culture, and various combinations of all the aforementioned.

The IT Team is responsible for connecting all the member research organizations to a local research network via Internet2. It is anticipated this network will be operational by January 1, 2005. Plans are underway to link UICOMP, ICC, USDA NCAUR, and CAT TSD to Bradley University, a member of the Abilene Network of Internet2. Local elected state officials are seeking funds to then connect the local research network to a larger research network in Illinois known as the I Wire that connects the Argonne National Laboratory with the University of Illinois, its National Center for Supercomputer Application and Electronic Visualization Laboratory, the University of Chicago, the Illinois Institute of Technology and Northwestern University.

Inter-institutional collaborative research promotion and management are two of the primary duties of the REI Team. An operational paradigm of Peoria NEXT is that collaboration leads to discovery and innovation that otherwise might not have occurred. A vehicle to enable networking was established in May 2002. As many of the anchor research organizations were encased in cultural silos, one of the early challenges of Peoria NEXT was getting the scientists, engineers, physicians and others to meet. An all-day conference entitled: "Discovery Forum 2002: A Celebration of Discovery" was developed. The programmatic focus of this gathering was to highlight the capabilities of local institutions to lead in the continuum of discovery, innovation, and commercialization. An unspoken agenda was to get the members of the science and technology community from the anchors to discover one another either intentionally or serendipitously.

The outgrowth of this gathering has been the formation of groups called Knowledge Communities. Composed of scientists, engineers, physicians, and/or educators, these groups meet regularly to have dialogue on topics of common interest. It was anticipated that the Knowledge Communities would foster the necessary conversations leading to relationships that would culminate in new idea formation. Examples of topical areas include materials science, biotechnology, medical robotics, medical patient safety, information technology, science and technology education and ethics. These idea-generating dialogues are producing new research teams, new educational endeavors, or as in the case of the Ethics Knowledge Community, new ways of thinking and acting toward one another.

“Discovery Forum 2003: A Celebration of Innovation” focused on commercialization activities beyond just the science aspect. Dr. Arden Bement, Director of the National Institute of Standards and Technology, discussed a national perspective. Mr. Jack Lavin, Director of the State of Illinois Department of Commerce and Economic Opportunity commented on the state perspective and Mr. Glen Barton, Chairman and CEO of Caterpillar Inc. addressed the local perspective.

“Discovery Forum 2004: A Celebration of Creativity” focused on the importance of creativity in the economic development milieu of the new economy. This forum brought together the scientific and arts communities from the region and was co-sponsored with the local umbrella marketing organization of the performing and visual artists, Arts Partners of Central Illinois. Additional sponsors included four colleges of Bradley University: the Slane College of Communications and Fine Arts, the Foster College of Business Administration, the College of Engineering and Technology, and the College of Education. Featured speakers included Dr. Steve Jones from the Welding Institute of Cambridge, England; Dr. Richard Florida, Professor of Economic Development at Carnegie-Mellon University and author of the best-selling book *The Rise of the Creative Class*; and Peggy Van Pelt and Tony Baxter from the Walt Disney Imagineering group.

Attendance at this forum exceeded the previous two by sixty percent. A special “Discovery Forum: A Celebration of Education” was held in the spring of 2003 and repeated in March 2004 for K-12 educators. These forums presented opportunity for dialogue among over 400 teachers on the importance of science and technology education to the future of Peoria. Speakers clearly brought forth the concept that K-12 education is but the beginning of the educational process and that a high school diploma, which used to be a terminal degree for a good paying job is now merely the prerequisite for necessary additional education and/or training for any reasonably well-paying job. It is understood by the Peoria NEXT leadership that a cultural transformation requires attention to learners of all ages. If it is accepted that knowledge will be the driver of wealth generation in the new economy, then education must play a leading role in any economic development activities.

At this forum, it was suggested that teachers should discard the notion that they are just educators and should consider the notion they are the leaders of the engine for economic development. Networking connections arising from this forum have led to the development of a large Education Knowledge Community with representation from the spectrum of K-gray educators. This group has also provided leadership for implementation of programs to connect the professional scientific community with children in the classroom and is the management group for educational projects aligned with the NSF PFI grant. Monies will be expended from that grant for science and technology fellowships and scholarships for high school students to participate in research projects at the USDA NCAUR, UICOMP, Bradley University, and the CAT TSD. In addition, the educational portion of that grant will fund programs for teacher research fellowships.

Lessons Learned

The principle lessons learned in pursuit of the Peoria NEXT vision have been that there is much to be learned in the process of leading change through collaboration and that no published road map exists. As there has yet to be written an Eleventh Commandment, "Thou shalt collaborate!" an understanding that collaboration is a process leading to an outcome, rather than an outcome itself, has been one of the most valuable experiences of this initiative to date. The process must be built out of trust that can only be manifest through personal relationships. Relationships, if non-existent, must be built through personal connections and conversations necessary to reach a level of trust. Discipline needed to pass through all stages of the process is critical to the successful implementation of strategies and their eventual results.

Problems we have encountered throughout implementation of the strategies have most often arisen in attempting to force by-passing a stage out of sense of urgency. The urgency should have been focused on the stage of the process, e.g. enabling necessary conversation, relationship building, etc., rather than the end game. These aforementioned problems most often directly correlated with under-communication, either of the vision or the steps toward the vision. By under-communicating, those in opposition to change have ready access to fertile ground on which to grow seeds of doubt and fear that somehow the vision of Peoria NEXT will be injurious to the community and region. This espoused concern for the greater good, of course, is a means of expressing personal discomfort and fear of the eventual outcome. The ability to recognize and tolerate the dichotomy of patience in the face of urgency must be a learned attribute of those leading change.

In our experience, the importance of engaging many stakeholders in the strategic planning process cannot be overemphasized. One must, with extreme intentionality, scan the horizon to recognize who are or who might perceive themselves as stakeholders early in the process. By identifying and engaging people from many different perspectives all along the way of the planning process, it eases the ability to seek their enrollment in the vision, i.e. they feel a strong sense of connectedness to the vision. Including people from many different disciplines and backgrounds can be complicating. A modicum of intermittent chaos may ensue. It has been our experience that the resultant creativity far exceeds the discomfort associated with the chaos.

Leveraging existing assets has been an important strategy for this initiative. Recent experience would suggest there is a small likelihood of attracting a new major economic driver to Peoria such as a Caterpillar, Inc. As there are no good economic models from which to learn for applying strategies in the knowledge economy, trial and error seem to be in play. The vision for Peoria NEXT is thus imbued with the notion of leveraging inherent but often undiscovered commonalities of purpose in seemingly disparate cultures to develop a new economic base. A tenacious search to identify those linkages and promote networking activities has led to productive serendipitous new alliances that here to fore were non-existent. Such actions have

yielded new opportunities for K-grey educators in science and technology programs, new research teams that leverage inter-institutional expertise and new business and job creation.

A final lesson learned is the profound impact of globalization of the economy. Inherent is the realization of the rise of the competitive presence of the nations of Asia and Europe. A negative impact has been the direct loss of jobs and their economic impact on the region. The positive impact has been the attempt to break down long standing community/regional barriers to collaboration. Civic leaders are coming to learn that a zero sum game approach to economic development is non-productive.

Challenges for the Future

The primary challenge for the future of Peoria NEXT is sustainability. Most change initiatives fail according to Peter Senge (1999) in *The Dance of Change*. Many authors have documented reasons for failure but those documented in Kotter's book *Leading Change* (1999) seem to ring most clearly with the Peoria NEXT leadership. They include allowing too much complacency, failing to create a sufficiently powerful guiding coalition, underestimating the power of vision, under communicating the vision by a factor of 10 (or 100 or even 1000), permitting obstacles to block the new vision, failing to create short-term wins, declaring victory too soon and neglecting to anchor changes firmly in the corporate culture. We have attempted to follow his recommended solutions for overcoming those mistakes which include establishing a sense of urgency, creating the guiding coalition, developing a clear vision and strategy, communicating the vision, empowering a broad-based coalition, generating some short term wins, consolidating gains to produce more change and anchoring new approaches in the culture.

For Peoria NEXT to survive, sustainable collaboration will be required. Fostering the conversations and relationships necessary to develop collaboration is the first step. Keeping the relationships healthy and vibrant with production of mutual benefit to the collaborating parties will be essential. Producing results in the form of new educational programs, new grants, new businesses and new jobs will maintain community support. Vigilance will be necessary in encouraging state and federal leaders of the importance of public/private collaborations like Peoria NEXT. It will also be essential they understand funding assistance is critical. Regional and city competition is already vigorous. Those cities and regions that seem to be moving quickly are those who embrace the necessary changes in their culture to support creativity of all forms according to Richard Florida (2002) in *The Rise of the Creative Class*.

One challenge that seems unique to the Midwest is the notion of entrepreneurial failure. The family farm has most notably represented entrepreneurial activity in this region, and failure is considered the ultimate shame. Contrasted with the entrepreneurial culture of the Silicon Valley where entrepreneurial business failure is a way of life, risk aversion is deeply embedded in this regional culture. Accepting more risk in business development will become necessary. Finally, as mentioned earlier, the

greatest challenge to overcome is resistance to change of any form. It is felt with the new economy moving at such a rapid and clear pace, change will occur. The question yet to be answered for Peoria and the region is whether a culture of evoking change or a culture of reacting to change will emerge.

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