



I99 Corridor Innovation Portal - Summary

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EXECUTIVE SUMMARY

As part of the I99 Corridor Economic Development Project, the Farrell Center researched methods to improve the innovation activity of the region. We found that there are indeed significant resources available to support entrepreneurs and small businesses in developing and implementing their plans. Unfortunately, these offices by and large work independently from each other. Indeed, they often view themselves as competitive rather than collaborative which significantly reduces the potential effectiveness of the resources deployed. We uncovered a number of initiatives in other areas where the internet is being applied to attack similar challenges. Based on the results of these applications, we propose that the region establishes an “innovation portal” which will enable the existing economic development resources to interact with entrepreneurs and business owners. More importantly, by using specially designed and proven web-tools, these resources can become more effective in creating value for the region through synthesis of knowledge and accessing extended networks in a dynamic rather than static process driven mode.

We are currently seeking funding to implement a pilot for this portal.

BACKGROUND

This document provides a summary of the research findings and recommendations of the Farrell Center undertaken as part of the 199 Corridor Economic Development Project.

Our mission is to assist with economic and marketing assessments of technology commercialization ventures within the university and the 199 Corridor region. We began by researching the current academic and practice literature on the following topics: University spin-offs, digital innovation, knowledge management, and network collaboration. We gathered information through interviews with the majority of the stakeholders within the economic development related offices along the I99 Corridor. We sought to identify, analyze, understand, and articulate the significant cultural and organizational barriers to effective collaboration in this region. In doing so we identified that not only have the current constituents missed opportunities to leverage the existing social capital which is necessary for effective knowledge transfer, but the systems for effective collaboration are not yet in place. Our findings and proposals confirm the concern of the committee that, although many of the resources for promotion of economic development exist along the I-99 corridor, both within PSU and through other State or Federal development initiatives, the flow of information between these entities has not been optimized. As a result, there is insufficient collaboration between resources. This reduces the effectiveness of the regional economic development system including the results of technology commercialization and economic growth initiatives.

Recent research (Warren, Trotzer, Hanke¹) suggests that our region is at an inherent disadvantage regarding technology transfer and new business development. This is due to our geographical “remoteness” as well as lack of tangible and intangible infrastructures found in more successful regions. These characteristics notwithstanding, opportunities still exist to increase the effectiveness of the region’s systems in order to avoid the shortcomings of the current “entrepreneurial” environment. Some of these specific problems are:

- Third parties seeking help have difficulty in identifying the most appropriate contact point.
- There is no “co-solving” of the complex problems associated with economic development.
- There is no structured method of accessing extended and powerful knowledge networks and applying them to an opportunity relevantly, dynamically and quickly.
- There is no traceable history of opportunity creation efforts resulting in the inefficient deployment of valuable resources.
- The University suffers criticism for not offering “user-friendliness” within an economic development system.
- Opportunities are undoubtedly missed resulting in lost economic value.

Local innovation and knowledge creation depends on the regions and the local players to establish channels and networks in order to access knowledge from distant nodes of knowledge production. It is obvious that it is not always possible to bring parties together in the same place to share ideas and collaborate towards solution development. This function can be achieved through the development of Dynamic Knowledge Management Systems (DKMS). An effective DKMS captures, builds upon, improves, and challenges knowledge resulting in so-called “heedful interrelating”. This occurs as participants in a social system understand how their interactions in the network and contributions affect

¹ “Models for university technology transfer: resolving conflict between mission and methods and the dependency on geographic location”, presented at the Cambridge Conference on Economic Development Policies, December, 2006

the structure, performance, and evolution of the system. This enables each player to optimize his/her efforts for the benefit of the team. DKMSs lead to the increased creation of new knowledge and innovation. We see the most valuable effects of these dynamic systems as:

- *Serendipity* in which cooperation uncovers new opportunities that would remain undiscovered without the existence of an interactive network
- *Synthesis* in which opportunities are expanded through the interaction of network members who build upon each others knowledge, experience, and creativity
- *Access to “Transactive Memory”* whereby participants in the network can themselves tap their own external knowledge networks even though they may not themselves have the relevant information. “It’s not what you know, but who you know!” For instance, an individual is struggling with a problem in his operation related to ceramics. He happens to get in touch with a colleague who claims “my Danish Uncle is an expert in moldable perovskite ceramics.”

A further benefit of a true DKMS is that the output is knowledge that is in an actionable format compared to the format of a Static Knowledge Systems.

Our proposed action applies an effective and practical use of a DKMS in the sharing of existing knowledge and creation of new knowledge in response to “challenges” within the I99 corridor. It is these problem-based challenges or “opportunities” that provide the most appropriate situations for the use of dynamic systems. In these constantly evolving systems, tacit knowledge can be accessed and built upon through idea synthesis and collaboration. Some examples include; informal communities of practice, discussion databases, Idea Management Systems, KM helpdesks and certain types of focused collaboration tools. Though there are many applications for DKMSs, we will focus on the use of such a system to innovate within the I99 Corridor as we construct an innovation portal designed to solve complex problems and expand embryonic opportunities

THE SOLUTION – I99 CORRIDOR INNOVATION PORTAL

The University has been seeking a proven effective, low cost method to promote collaboration. In recognition of the problems and associated opportunities, we propose an “Innovation Portal” based on the synthesis of two proven commercial software platforms, “IdeaCentral”™ and KCSOURCELINK.

This powerful entrepreneurship support system has an interface that allows “challengers” (entrepreneurs, faculty, SMEs, etc.) to create a simple profile which is then automatically evaluated by the system to connect the entrant to a subset of functional offices. This intelligent program determines which combination of service providers (IP Office, SBDC, Technology Transfer Office, etc.) is likely to be the most appropriate to handle a more detailed assessment of the needs of the opportunity. After the “Gatekeeper” service provider is identified, a “case” summary in a standard format is completed by the entrepreneur in cooperation with service provider. Once inputted into the system, the software program delivers the case to a central workspace organized by industry, geography, stage of development etc. The service providers that most closely match the needs of the case are alerted via e-mail to review the profile. Additionally, all authorized service providers (considering sensitivity, confidentiality, proprietary nature) in the network can access the opportunity to add content to the case evaluation and provide perspective and insight (expert commentary) for the entrepreneur in a transparent process. The opportunity search by the service providers is facilitated by intelligent software and peer to peer communication. This ignites innovation through the use of dynamic knowledge management and harnesses the power of the entire network.

We have found an abundance of useful websites that offer a comprehensive listing of references to service providers (point to point systems); however these models do not take advantage of the powerful forces derived from serendipity, synthesis and transactive memory effects found in effective dynamic innovation networks. We seek to transfer the burden in accessing the right support services from the entrepreneur to the service providers. The service providers benefit by being able to “segment” their market and specialize in serving certain type of opportunities. This promotes efficiency by shifting the focus from quantity of service to quality of service.

We are in negotiations with KCSourcelink (funded by the Kauffman Foundation) to license their software as the front-end of our platform and have been working with Imaginatik, Inc which offers a more functional software that completes the back-end development. We have identified these potential tools for accomplishing our goal of fostering interactive and dynamic evolution of entrepreneurship opportunities. We are currently seeking funding to complete a pilot project.

FEATURES AND BENEFITS

- An efficient, seamless, user friendly model operating on a proven innovative virtual platform.
- A web meeting place where the needs of entrepreneurs and business owners can be articulated and diagnosed
- Efficient navigation of the existing but disconnected network through multiple entry points.
- Stimulates and supports dynamic knowledge management.
- Greater visibility within the network decreasing duplication of effort
- Collaboration is improved as information flows more quickly
- Elicits activity metrics to help in reporting and to guide improvements
- Can be optimally tailored to meet the unique needs of the many different entrants into the system,
- Reduces frustration and improving efficiency of assisting new “challengers” to the system.
- Propels Penn State University as a leader in the use of Dynamic Knowledge Networks for the promotion of economic development and, by doing so, acts as a major catalyst for growth in the region.
- Stimulates a culture of collaboration with the University and the local business communities.
- More efficient use of resources, creating value and jobs through technology commercialization

SUMMARY

From our research we have found no such complete system implemented anywhere, only component parts. In addition to stimulating the local economy and realizing a greater return on investment of PSU’s resources and the immense annual research budget, we aim to create a more distinct Entrepreneurial culture for Central PA – a culture that recognizes, embraces and celebrates entrepreneurs, developing a unique place where entrepreneurs and investors choose to live and work. We have researched similar initiatives being tested by other regions and talked to experts on stimulation of economic development. Universally we have been told that this portal is unique and would put PSU and Central PA in a world leadership position in the use of IT and virtual networking for promoting economic development. Our goal is to see Penn State set an international standard for university supported entrepreneurial networks. (Comprehensive white paper available on Farrell Center website - www.smeal.psu.edu/fcfe/more/white)

APPENDIX

List of Economic Development Entities in the I99 Corridor

* = those that were interviewed

- Office of Research Commercialization*
- Office of Industrial Research*
- Intellectual Property Office*
- Technology Transfer Office*
- Ben Franklin Technology Center*
- Small Business Development Center
- PSU Outreach*
- PSU Discovery*
- Penn TAP
- ABCD Corp*
- KIZ*
- MEP/IMC*
- Entrepreneurship Institute, PSU Altoona
- Chamber of Business and Industry Centre County
- The Learning Factory, PSU College of Engineering
- PSU Materials Research Center
- Bedford County Development Association*
- Center County Industrial Development Corp
- PSU Office of Continuing and Distance Education