

Attachment E

Business Plan

2011 Innovation Partnership Zone Re-Designation Business Plan

Mission

“Building healthy and sustainable communities, environments, economies and people through research, technology development and commercialization”.

Goals

The goals of the Spokane University District Innovation Partnership Zone (SUDIPZ) are to utilize the talents and the outputs of the educational institutions and the activities of private firms to create:

Healthier Communities – using state of the art data mining and information technologies to identify trends and patterns occurring in communities that could be addressed with innovative healthcare and biomedical research and commercialization, and educating students in medical, dental, pharmacy, nursing fields, etc., to deliver healthcare in the future

Healthier Environments – leveraging faculty, students, curricula, research and sustainability techniques to design new building or renovate existing building stock to be high performing, healthy environments for our citizenry

Healthier Economies – creating alignment opportunities for economic and workforce programs that can help to increase or grow new jobs and new businesses in both the healthcare and clean technology arenas

Healthier People – improving human health through unique and focused pursuit of biomedical research, interprofessional health education, novel therapeutics and diagnostics, improved patient care and outcomes

Leadership/Governance

Description of your management teams and roles

The management team of the Spokane University District Innovation Partnership Zone is described below:

Rich Hadley, CEO, and Robin Toth, VP, Business Development, Greater Spokane Incorporated – Innovation Partnership Zone Administrator. The administrator is responsible to collect and report annual performance criteria which includes number of workers, business sites, assets, and investments. GSI also participates in the annual conference, and helps to market the area as a state-designated IPZ.

Dr. Brian Pitcher and Barb Chamberlain, Washington State University Spokane – Washington State University Spokane is the main university partner that fosters commercially valuable research or creates commercially applicable innovations, and also the educational institution that will provide workforce training related to the research or the commercial application of the research.

Teresa Brum, City of Spokane – The City of Spokane provides services to the Innovation Partnership Zone and has designated the Spokane University District as a Targeted Development Area. They currently are using Local Revitalization Funding to build out infrastructure in the District, as designated by the Washington State Legislature.

Kim Zentz, Innovate Washington – Innovate Washington was recently designated by the State of Washington to optimize the delivery of technology transfer between the state’s research institutions and businesses. Among other things, Innovate WA will assist businesses in creating new products and acquiring federal research grants.

Brandon Betty, Downtown Spokane Partnership – The Downtown Spokane Partnership manages the University District Development Association which serves as the catalytic organization to achieve the vision identified in the University District Strategic Master Plan.

Kim Pearman-Gillman, McKinstry – Kim will represent the private clean energy firms in the SUDIPZ.

Anticipated partner involvement and investment

The management team highlighted above is very involved in the growth and development of SUDIPZ through a multitude of roles.

- Health Industry Development Group
- Higher Education Leadership Group
- University District Development Association, University District Marketing Communication Group, University District Advisory Council
- Academic Health Science Center (AHSC) Planning and Coordination Steering Committee
- AHSC Academic & Biomedical Research Leadership Group
- AHSC Communications & Economic Development Group
- AHSC Resource Leadership Group
- AHSC Healthcare Partnership Leadership Group
- Consortium of Local Energy and Efficiency Northwest Companies (CLEEN NW)
- Washington Clean Technology Alliance

The partners identified above provide more than \$250,000 per year in actual dollar investments in the SUDIPZ and provide far more than that dollar figure in in-kind activities.

Please see Appendix III for further details about the University District Development Association, their 2011-2012 Project List and a map of projects in the SUDIPZ.

Other partners include the WWAMI program, University of Washington, the local hospitals, Gonzaga University, Whitworth University, Eastern Washington University, Community Colleges of Spokane, the Spokane County Medical Society, Avista Corporation, Baker Construction and Development, Cowles Company, Inland Northwest Health Services, Kalispel Tribe, Kiemle & Hagood, Providence Health Care, Red Lion Hotels Corporation, Spokane Association of Realtors, Spokane County and Washington Trust Bank.

Sustainability plan over the next four years

Dr. Elson Floyd of Washington State University designated the Spokane Campus of WSU as the school's Health Science Campus, with plans to move the College of Pharmacy and grow veterinary medicine, public health and allied health programs at the campus. Currently first year medical and dental students are taking classes in the SUDIPZ, with plans to grow those numbers and the number of courses in the near future. In addition, WSU opened its College of Nursing in 2009, and now is teaching over 600 nursing students.

Both private and public partners in the SUDIPZ are very engaged and have been front and center in advocating for the growth of this area as an Academic Health Science Center. These companies have funded the development of a Feasibility Study for a Four Year Medical School and Graduate Medical Education in Spokane, Community and Economic Impact Report of Health Care in this region and a Business Plan for the Academic Health Sciences Center. In addition, the University of Washington undertook a Graduate Medical Education Expansion study.

The next phase of health sciences buildout for the SUDIPZ will begin in October 2011, with ground breaking for the Phase 1 120,000 sf Biomedical and Health Sciences building which will house research space, labs, a vivarium, classrooms and faculty offices for health sciences research and teaching.

The Health Sciences and Services Authority of Spokane County (HSSA) and the Empire Health Foundation (EHF) have collaborated on a Strategic Investment Plan to increase the amount of health sciences research activity and funding in the Spokane area. Sustainable, ongoing health sciences research will contribute to economic development and job growth in the region, and has the potential to improve health outcomes among residents.

Together, HSSA and EHF plan to invest up to \$12.5 million over the next 10 years. EHF and HSSA also plan to help attract another \$5 million in health sciences research investments from collaborating funders, for a total of \$17.5 million in planned investments. In addition to the \$17.5 million, the objective is to leverage additional public and private investments made by other organizations, including Washington State University (WSU), the University of Washington (UW), and other funders and foundations.

The combination of these initial investments is expected to increase the level of health sciences research funding from the National Institutes of Health (NIH) and other federal and private funders from current levels (\$12 million in 2011) to \$70 million annually by 2030.

The community is invested in growing the Riverpoint Campus, the University District and the Innovation Partnership Zone. While this information pertains directly to the healthcare sciences and services industry, there is also much growth in the energy efficiency and clean technology arena in and around the SUDIPZ.

Please see Appendix V which shows the clean technology companies in and around the SUDIPZ.

In a recent clean technology gap and opportunity analysis we found that there are more than 200 clean technology companies in the greater Spokane region, with about 23 of those companies located very close by or in the SUDIPZ. Greater Spokane Incorporated and our partners at the Spokane Area Workforce Development Council generated a regional strategic implementation plan that would be used to guide support for education and training for jobs in the clean energy industry. The Strategic Implementation Plan is summarized in brief below:

1. Integrate Leaders from Public and Private Sectors

Develop a strategic dynamic framework that will bring key stakeholders together to identify business opportunities and workforce skills to assist in the growth of jobs and companies.

2. Develop an Asset Map

Resources will be mapped to help identify the gaps in investment and training activities, and increase the focus on prioritized skills and technical competencies necessary to support the industry and our regional economy.

3. Expand Technology Infrastructure

Provide improved technology and web-based tools to connect all stakeholders, collecting and disseminating data to strengthen and enhance communication between all organizations in the development of the workforce for the clean energy industry.

4. Improve Marketing and Access for Customers

Increase awareness of the opportunities and the new skills and training necessary for prospective employees to participate in this industry.

There are also opportunities in a number of areas of research at the universities which include smart grid, sustainable design, bio-mass energy, smart farm – smart home and renewable energy. These areas will continue to be mined for IP that can be used to start or expand new companies.

Innovate Washington is an integral part of the SUDIPZ. The mission of Innovate Washington is to make Washington the best place to develop, build, and deploy innovative products, services and solutions so that ideas developed in Washington lead to quality jobs in Washington. The Spokane office of Innovate Washington will be the hub of this recently established, sector-based economic development strategy aimed at making Washington companies even more globally competitive. The services provided by Innovate Washington will range from technology-based entrepreneurial support at the individual company level to broad based initiatives and large scale projects identified by the state's targeted economic sectors. Innovate Washington is the primary agency focused on growing our innovation-based economy and will do so through a public-private partnership model.

By combining the talents, assets and collaborative networks of Sirti and the Washington Technology Center, Innovate Washington will build on the effective and efficient delivery of impactful entrepreneurial support services which have been enjoyed by clients of both organizations in the past. Services such as coaching and consulting, SBIR/STTR grant development support, partner introductions,

bridge loans, accelerator facilities, intellectual property protection & market launch services as well as expert assistance in access to every form of public and private capital for launching and growing an innovative business in Washington.

Strengths of the IPZ

Technology

The original IPZ application included a long list of technology advancements within the SUDIPZ. Connectivity within the SUDIPZ continues to grow, based on new investments by the Universities and Washington state, ably assisted by our federal delegation. The project enabled by the original IPZ grant allowed the buildout of a state-of-the-art campus datacenter which is capable of transmitting in excess of 10 gigabits per second of information. The facility is used as the information technology hub for the entire campus, as well as for intensive research activities as required by the firms, investigators and researchers at Riverpoint. The datacenter also hosts the Voice over Internal Protocol (VoIP) for the campus.

Current occupancy includes multiple WSUS and WSU Pullman departments, units and research groups, Innovate Washington and Eastern Washington University. There are three high performance compute clusters compliments of the Applied Sciences Lab and a Microsoft donation to WSUS that is utilized for nursing research. Future plans in discussion include connections to Eastern Washington University Cheney and City of Spokane projects.

In addition to the datacenter, the area's federal delegation advocated for funding to launch the Spokane version of the Pacific Northwest GigaPop, an advanced fiber-optic network that can send and receive vast amounts of information to enhance research, education and economic development. This connection digitally links the SUDIPZ to the world and vice versa. The connection provides access to high-performance networks serving education, research and development in the U.S., Canada, Europe and the Pacific Rim. It enables regional high-speed data exchange with WSU Pullman, the Pacific Northwest National Laboratory (PNNL) in the Tri-Cities and the University of Washington in Seattle.

Researchers use it to transfer massive computer files to collaborators at institutions outside of Spokane. Three-dimensional animation, complex computations, and new audio collaborations are done quickly and efficiently. Students and researchers have access to distant, site-specific resources that were previously inaccessible—such as telescopes, underwater observatories, and special laboratories. Medical students observe surgeries and other procedures remotely. Specialized medical diagnostic tools are used far from their home locations.

Human Capital

Communities provide many types of assets for residents. Some are based on the physical landscape of the region- providing natural resources to live and survive. Others are built infrastructure- moving people, goods and information from place to place. Lastly, there are the kinds of assets that are necessary for a community to thrive and to prosper by creating or reacting to change. Human capital

and social capital are such assets to a region. They promote goodwill, trust, and cooperation between members and groups of a community.

Human capital is the notion that all people have the ability to be great and do great things. All members of a society have the ability to function as a working part of the economic system within their community and to foster ideas, innovation and services for the better good of society. Economic vitality is 100% dependant on human capital. Without hard-working people exerting their skills and knowledge, societies become stagnant at best.

Social capital is an asset that can be leveraged to create deals and relationships, build teams and community, moderate disagreement, inspire innovation and change, enter new markets, and attract businesses and citizens to a community. It is the strength of social capital, in the form of leadership, partnerships, esprit de corps, and community spirit that drives economic growth and development. The Spokane University District Innovation Partnership Zone is rich in all these elements, which are critical to economic growth and vitality. The community is particularly noted for its collaborative culture and interconnected social networks that enable talented workers, entrepreneurs, investors, community volunteers, and leaders to tap into the community's resources.

Infrastructure

The 770 acre Spokane University District Revitalization Area was created by ordinance in August 2009. This is a local revitalization financing district, a form of tax increment financing, authorized by the legislature in 2009. The proposed public improvements have an estimated value of just under \$40 million dollars and were drawn from adopted plans and an extensive public participation process. The public improvements include water and sewer upgrades, stormwater and drainage systems, transit facilities, streetscape and safety enhancements and other projects throughout the SUDIPZ.

Projects which have occurred over the past four years include:

- Riverside Phase I (under construction)
- Riverside Phase II (under design)
- 2nd Ave (under construction or completed)
- Ben Burr Trail (under design)
- Division St Gateway (scoping then design)
- TS&L Study Ped/Bike Bridge

See Appendix IV for a list of anticipated infrastructure projects in the SUDIPZ.

Long-Term Market Growth for the Technology

Health Sciences and Services

A recent analysis of the Riverpoint Campus and health and biomedical programs estimated potential community and economic growth over the next 20 years. This analysis considered:

- Expansion to a four-year research-intensive medical school
- Expansion of clinical clerkships
- Expansion of residence positions at hospitals
- Expansion of other health science programs – dentistry, pharmacy, nursing, allied and public health
- Expansion of healthcare programs and services
- Expansion of research
- Related commercial spinoffs

The assumptions from the analysis incorporated both expansion of medical education and recruiting and retaining high-quality faculty who compete successfully for funding from national and international sources.

As the SUDIPZ has a focus on research and innovation, it is important to include the types of medical research that are currently occurring. Contributing research activities are:

- Molecular biology research
- Mental health research and training
- Nursing research
- Pharmacy clinical research
- Health education research
- Sleep and performance research
- Health informatics

The analysis found that growth in research and biosciences in Eastern Washington is estimated to grow from \$32.4 million in 2009 to \$656 million in 2030.

Clean Technology

In 2010, Greater Spokane Incorporated managed a project to analyze the clean technology market in Spokane and Eastern Washington. This was not a scientific or qualitative analysis; therefore, the information should be viewed as company anecdotes versus scientific research. That said, the information gathered in these interviews shows positive growth in revenues and employment, especially in the last ten years. The majority of these companies relied on self-funding to get their companies off the ground, and that recruitment of the appropriate talent would potentially help with faster growth. Research in the clean technology industry is critical to elevate this industry in Washington State. To develop a focused cluster strategy in Eastern Washington, effort was put into surveying the activities underway in both University and Industry sectors through individual one on one interviews with leading

companies and researchers. These interviews focused on identifying specific gaps and barriers to collaboration and successful commercialization. This information will be utilized to begin the growth strategy for the clean technology industry. The connections within the SUDIPZ and the Pullman IPZ will be important to make faculty and researcher connections to entrepreneurs and innovators in the region.

Entrepreneurial Climate in the Proposed Zone

In 2010 prior to becoming Innovate Washington, Sirti provided entrepreneurial support services to 64 on and off campus clients located throughout the Inland Northwest. These clients included companies from bioscience and the clean energy industry, in addition to those in Information Technology.

There were over 1,725 jobs and \$325 million in add-on investment associated with Sirti clients of the last ten years. These clients had a record 98 invention disclosures and patent applications for 2010 and contributed over \$42 Million in regional payroll for the year with an average wage of \$58,482. Innovate Washington will maintain staffing and accelerator facilities in Spokane and the Tri-Cities.

Innovate Washington will be the primary organization in the SUDIPZ to assist entrepreneurs and companies with commercialization activities. They will use the following commercialization plan summary to guide the efforts of these businesses to ensure that they have the best environment for successful transition to an economic driver for the region.

Commercialization Plan

Dependent upon the type of research, a commercialization plan may vary from company to company. The following is a fairly standard commercialization plan outline to ready the technology for market.

- a. Statement of Intention
 - a. Summarize type of license, patents associated with license, and the desired field of use
 - b. Describe how the technology will apply to a particular commercial sector and how it will be marketed to prospective customers.
- b. Justification
 - a. Explain the activities of the company, what type of company, what markets it serves, partners it works with and the development of new products.
 - b. Describe the scope of supply, plants and locations and recent production numbers.
 - c. Describe recent market share estimates and rankings, and any recent market developments.
 - d. Describe short- and long-term company strategies and objectives and how the licensing of the technology fits into these plans.
- c. Target Markets, Values and Sizes
 - a. Provide an analysis of the potential market size, the monetary value of the market, current market position, and potential market penetration.
- d. Value of Technology in Each Specific Market Place
 - a. Describe how incorporating the technology into various market places will be attractive to customers and clients.

- b. Give examples.
- e. Specific Marketing Steps for Each Market
 - a. Describe how the company will go about establishing the market and attracting customers.
- f. Potential R&D Milestones
 - a. Discuss any steps that must be taken in the area of R&D to allow the technology to be fully ready for commercialization or for followon applications or enhancements.
- g. Timeframe to Market
 - a. Identify the schedule for bringing the technology to market
 - b. Include all necessary steps such as acquiring the license, entering and conducting an agreement to fully develop the technology
 - c. Identify market planning and development

See Appendix V for a more complete commercialization plan.

Accomplishments/Progress to Date

There have been many accomplishments in the SUDIPZ to create the appropriate environment for research, innovation and commercialization. Since October 2009, the following highlighted activities and programs have been announced.

- Sirti received \$250,000 from the ARRA for a loan fund for companies with innovative clean energy technologies
- Riverpoint Advanced Mathematics Partnership receives \$850,000 grant to continue professional development project to partner college math faculty with local K-12 teachers and principals to prepare students for college
- WSU Spokane is honored with the 2009 Excellence in New Communications Award for Academic Micro-blogging
- National and state agencies renew accreditation for Washington State University's College of Education, recognizing it as a standout institution.
- City of Spokane forms the University District Revitalization Area (UDRA), a 770 acre tax increment finance district encompassing the SUDIPZ and directing \$40 million dollars in proposed public improvements over the next 25 years.
- The University District Development Association (UDDA) is formally created as a 501 c(3) non-profit to advocate and facilitate urban development and revitalization within Spokane's University District.
- Eastern Washington University celebrated the Silver Anniversary of its Computer Science Department. A graduate course in software engineering is offered at the Riverpoint Campus.
- WSU College of Nursing partners with the Air National Guard in human patient simulation training. This partnership enables local military branches to train their units without expensive travel and keeps military training money in the local community.

- A discovery by scientists at WSU Spokane’s Sleep and Performance Research Center, and published in the journal *SLEEP*, may identify a misunderstanding about the elements of cognitive performance and sleep deprivation.
- For the first time in the State of Washington, more than 50 applicants to the University of Washington WWAMI program undergo medical school admission interviews in Spokane, versus Seattle.
- WSU Veterinary Specialty Teaching Clinic celebrates its grant opening in the SUDIPZ.
- A study prepared by representatives of the University of Washington, Washington State University, the Spokane County Medical Society, Greater Spokane Incorporated, area hospitals and other business and health care providers recommends the expansion of medical education in Spokane to help address the critical shortage of physicians in rural and eastern Washington.
- Sirti partners with Eastern Washington University’s Mechanical Engineering, Computer Science and Computer Graphics departments on internships to match students with Sirti clients to provide support on specific projects.
- City of Spokane planning and construction projects to address transportation, connectivity and neighborhood vitality on and around the SUDIPZ include:
 - University District Sprague Corridor Study focusing on energy efficiency and economic growth
 - University District Bicycle and Pedestrian Bridge
 - Spokane Falls Blvd Redesign
 - Central City Transit Alternatives Analysis
 - Division Gateway Corridor Planning and Design
- Washington State University is recognized as one of the nation’s most environmentally friendly schools for its commitment to sustainability by “The Princeton Review’s Guide to 286 Green Colleges”.
- Tripp Umbach study calls the Riverpoint Campus “America’s next great academic health center” and reports annual economic impact of \$1.6+ billion in the region and over \$2.1 billion statewide, based on the bailout of a research-intensive comprehensive academic health sciences center.
- Riverside Extension road construction project is officially renamed Martin Luther King, Jr. Way during a dedication ceremony.
- Weihang Chai, assistant professor in the medical program at WSU Spokane, makes national news with her team’s discovery of a mechanism to help cancer cells age and die, which could ultimately lead to treatments that slow or stop tumor growth.
- Project Lead the Way designates WSU Spokane as the first Biomedical Sciences National Affiliate on the West Coast. WSU Spokane will provide the core training for high school teachers to offer a sequence of courses to prepare students for college study and careers in the field.
- WSU Regents Professor James Krueger and his research group move to WSU Spokane from WSU Pullman, consolidating the majority of both basic and applied sleep research in Spokane and providing a significant expansion to the medical sciences research portfolio

- U.S. Sen. Patty Murray announces that \$2 million for soil remediation on the site of the Biomedical/Health Sciences Building phase I at Riverpoint, and \$1 million for Division Street Corridor safety/design improvements, are included in the Senate Transportation, Housing, and Urban Development (THUD) Appropriations bill. The bill will advance to the Senate floor for future consideration.
- The Health Sciences and Services Authority announces a grant to Greater Spokane Incorporated with WSU Spokane as lead partner to conduct regional outreach in support of the expansion of health sciences at Riverpoint.
- The Washington State Department of Commerce, State Energy Program awarded the Sirti Foundation an additional \$1,250,000 from the American Recovery and Reinvestment Act for a loan and grant fund for early-stage & established companies with innovative clean energy technology.
- WSU Spokane and Sirti agree to a lease arrangement to establish an interim location for a vivarium in support of research activities for WSU Spokane health sciences campus.
- WSU Regents adopt a proclamation designating WSU Spokane as the university's health sciences campus.
- The capital funding request for construction of the Biomedical Health Sciences Building phase I on the Riverpoint Campus is approved by the WSU Board of Regents as the university's top legislative priority in the capital budget. An operating request for development of plans to begin expanding medical education in Spokane is also approved, to go forward in partnership with the University of Washington
- The Washington State Legislature approves funding for Phase 1 of the Biomedical Health Sciences Building. Groundbreaking on the building will occur October 4, 2011.

Plan for Measuring and Reporting

Greater Spokane Incorporated uses a variety of sources for reporting on jobs, companies, innovations, activities and infrastructure for a wide variety of grants, public funding, investments, etc. In addition, we utilize the industry standard IMPLAN economic impact software to calculate direct, indirect and induced jobs, tax revenues and annual economic impact.

As the administrator of the SUDIPZ, we will continue to track the following information for the annual report:

- Number of startup companies, jobs, payroll and private investments
- Number of new and recruited companies, jobs, payroll and private investments
- Number of retained and expanded companies, jobs, payroll and private investments
- Number of licenses and patents
- New activities of innovation
- Revenue increase by company – if not deemed confidential
- Products or services developed from research or in the lab
- Media coverage and marketing activity