



Department of Commerce
Innovation is in our nature.

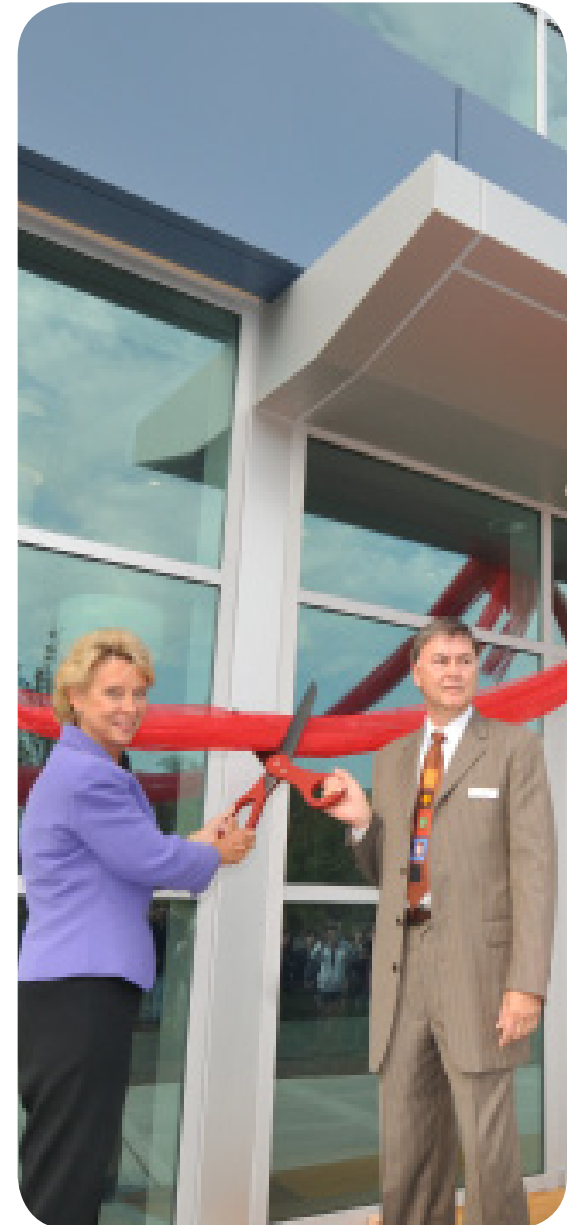
Business Services Division

Innovation Partnership Zones: First Steps toward a More Collaborative Approach to Economic Development

Provided as directed by (SHB 1091), Section 43.330, Chapter 227,
Laws of 2007

November 2010

Report to the Legislature
Rogers Weed, Director



Acknowledgments

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Special thanks to the over 40 zone administrators and partners of the state's 12 innovation partnership zones who took the time out of their busy schedule to provide data, program background, and suggestions for how to improve the IPZ program.

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Executive Summary

This report presents descriptive research on the state's 12 innovation partnership zones (IPZs). Data from annual reports were reviewed and telephone interviews conducted with more than 40 stakeholders.

Research found that the organization, structure, and functions of IPZs vary for each zone. Funding for operations is minimal and comes from local economic development funds or through cooperative arrangements. The IPZs seek capital funding from state, federal, and local sources.

The focus of each IPZ is as varied as the state's geography and economy. Most feature one or more institutions of higher education, developing new research efforts, training workers, establishing new forms of education (new degrees or updated skill sets), and addressing the economy's challenges. Most zones focus on forward-looking or sustainable industries intended to create new marketable products and/or patentable ideas.

Annual reporting to the Dept. of Commerce includes various hard metrics such as private investment, patents filed, and jobs created. Most IPZs have little to report on these fronts. Nonetheless, many of the administrators report that the IPZ designation helps to reach local economic goals, allowing new doors to open for collaborative economic development.

The zone administrators agree that flexibility is the key element to zone success. This has allowed for a variety of approaches and many disparate outcomes. Stakeholders reported that IPZs provide a useful framework for building industry cluster strengths by, for example, supporting nascent businesses through their most difficult early years.

In Section 2's recommendations, the Washington Economic Development Commission (WEDC) argues that IPZs represent a new kind of economic model that can play an important role in the state's economic recovery. IPZs are not a single program but a framework that shows promise in catalyzing regional innovation through a decentralized, organic, and collaborative initiatives.

To further the development of IPZs the state should:

- Offer operational funding to IPZs so they can build their organizational capacity.
- Use the IPZ model to better coordinate fragmented federal, state, and local economic development initiatives, e.g., by investigating which federal economic development programs have the greatest potential to align with IPZs strategies.
- Strengthen the IPZ network and research collaboration, such as through web-based information sharing, recognition of successful inter-regional collaborations, and innovation "X" prize competitions.
- Develop new financial tools such as:
 - * Testing the feasibility of self-financing innovation clusters similar to Washington agriculture commissions.
 - * Expanding IPZ access to capital by supporting local financing tools such as tax increment financing (TIFs).
 - * Encourage state agencies to provide more flexibility for IPZs in grant and contract programs.
- Focus performance metrics on outcomes in regions as a whole, be relevant to the IPZs' unique governance structures, and have broad utility to stakeholders in the region.

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Introduction

The Department of Commerce is required under 43.330.270 (11) RCW to produce a biennial study to the Governor and Legislature that reports on the performance of the state's innovation partnership zones (IPZs).

The Washington Economic Development Commission (WEDC) is also required per RCW 43.330.270 to make recommendations on ways to increase the effectiveness of individual zones and the IPZ program; those can be found on Page 54.

This report presents descriptive research providing a baseline of information on each of the IPZs. The Washington Economic Development Commission (WEDC) plans to use the information in this report to conduct follow-up research with a more analytical focus.

IPZs are required by statute to submit performance data in annual reports to the Dept. of Commerce. Data include private investment information, job creation measures, and measures of innovation. We present highlights of this reported data with the caveat that it tells only part of the IPZ story because it focuses on inputs and outputs. Of potentially greater policy-making importance may be outcomes data. For example, how many jobs have been created by IPZs? As discussed in the Appendix (see Page X), gaining access to relevant data was not possible within the budget of this study, but a potential methodology for follow-up research is presented.

In the pages that follow, you will find a case study on each IPZ. Information was drawn from annual reports as well as telephone interviews with zone administrators and

STUDY SCOPE AND METHODOLOGY

partners. Some case studies are more detailed than others. This is due to the age of a zone, whether it has received funding, and whether the zone has changed direction. Employment and funding data are included where appropriate, but the research is primarily qualitative in nature.



Credit PNNL

The IPZ program is the result of legislation passed in the 2007 session directing the Department of Commerce (formerly the Dept. of Community, Trade, and Economic Development) to design and implement a program to encourage and support research institutions, workforce training organizations, and businesses to work cooperatively in small geographic areas. The goal is creation of commercially viable products and jobs. **“Our state’s IPZ program and the collaboration it promotes leads to ground-breaking discoveries and innovation,”** said Washington State Gov. Chris Gregoire in signing the legislation into law.

Egils Milbergs, executive director of the WEDC, sees IPZs as “testing geographically based economic development zones that are creating innovation eco-systems.” This is an economic development model intended to encourage collaboration to advance innovation. The goal of each IPZ is to stimulate the growth of regional economies by strengthening industry clusters and intellectual capital. IPZs are intended to turbocharge the development of new technologies, marketable products, company formation, and job creation.

The timeframe for zone development is five to 10 years. IPZs are designed to develop long-term relationships and projects, working with state and federal processes that could take a number of years to yield grant money and support. Additionally, projects that require permits for construction, or land uses that require zoning changes, take time to reach fruition.

“Our state’s IPZ program and the collaboration it promotes leads to ground-breaking discoveries and innovation”

In 2007, the Dept. of Commerce designated 11 IPZs and distributed to them \$5 million in capital grants. Zone designation can occur in each odd calendar year. In 2009 Commerce designated a twelfth IPZ and distributed an additional \$1.5 million in capital grants. Grants were competitive and not all IPZs have received state capital grant funding.

Designation criteria include:

- 1) Formation of a partnership consisting of some or all of the following: academia, research laboratories, public economic development organization, local governments, chambers, private companies, and workforce training organizations;
- 2) A specific geographic area with an existing or emerging identified industry cluster of statewide importance; and
- 3) A strategic plan for regional cluster development.

The IPZ program does not provide operational funding or tax incentives for the zones.

Introduction

MAJOR CHARACTERISTICS OF IPZS

IPZ organization, structure, and functions vary for each zone, although all have a designated zone administrator for coordination and reporting purposes. The zone administrator is usually the employee of a government entity (city, port, county) or local economic development or workforce training organization. Funding for operations is minimal, usually provided by local economic development funds, or cooperative arrangement or in-kind contribution of the partners. The zones seek capital funding from state, federal, and local sources. Some zones have buildings associated with their efforts located on partner property (ports or institutions of higher education), but many do not. Most zones focus on forward-looking or sustainable industries intended to create new marketable products and/or patentable ideas. Many also feature an educational component offering certificate or degree training.

The focus of each IPZ is as varied as the state's geography and economy. Some areas feature alternative energy generation or alternative fuel creation. Some industrial areas focus on worker training and sustainable manufacturing. High-density areas have biotechnology elements, agricultural areas work on water and sustainability, and all are engaged in research and development. Most feature one or more institutions of higher education, developing new R&D efforts, training or re-training workers, establishing new forms of education (new degrees, or new topic areas), and addressing the economy's challenges.

Many IPZ capital grant projects have been completed but progress varies for the IPZs that did not obtain capital funding. IPZ boards and working plans are in place, and many have developed 501(c)3 nonprofit organizations and partners for fund raising purposes. However, the economic downturn has significantly slowed the pace of progress.

Annual reporting to the Dept. of Commerce includes various hard metrics such as private investment, patents filed, and jobs created. Most IPZs have little to report on these fronts.

Nonetheless, many of the administrators report that the IPZ designation helps to reach local economic goals by opening doors to greater collaboration. The legislation originally termed IPZs a type of "technology park," but this does not fully describe the emerging nature of many of the zones.

Zone administrators agree that flexibility is the key element to their success to date. This has allowed for a variety of approaches and many disparate outcomes. Two zones have reassessed their direction and refocused on new topics. All of them feature alliances of business, government and academia that are unique, each centered on growing the local economy. In some cases, a project might have occurred without the zone designation, but the collaborative approach combined with the opportunity to interface with academia, business, and economic development experts has accelerated the pace of change.

Introduction

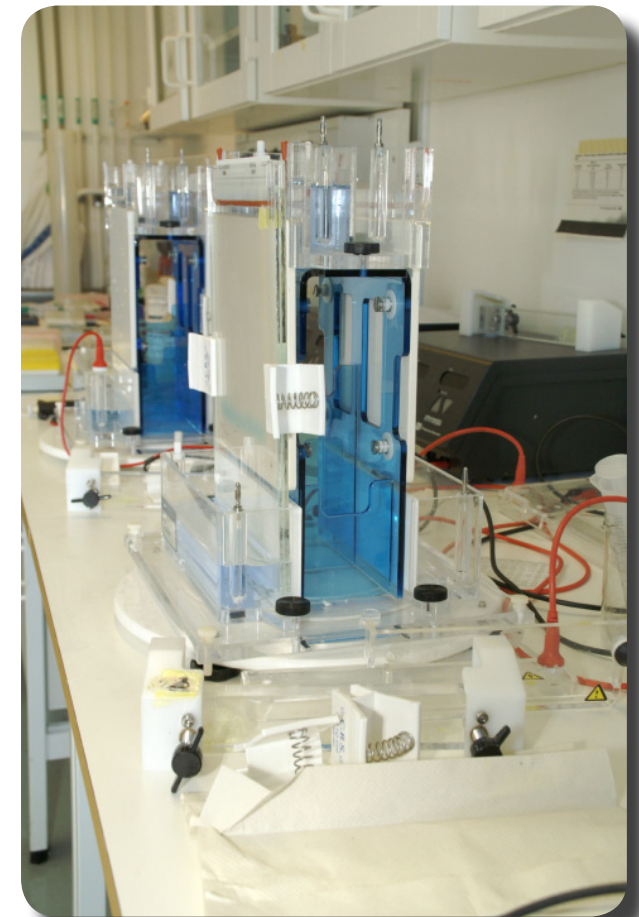
“Combine them all, and they form the Governor’s research park.”

Administrators and partners reported that IPZs provide a useful framework for building industry cluster strengths. This focus crystallizes goals, foments collaboration, and provides a rallying point for partners. One zone administrator summarized the IPZ program this way: “Combine them all, and they form the Governor’s research park.”

The zones also have functioned as small business incubators, providing flexibility in housing, access to shared research and development laboratories and facilities, access to expert advice, training opportunities, and transportation experts. These elements together can support nascent businesses through their most difficult startup years. The direction of each IPZ has been driven primarily by one key person or a small group of people. The key person is often the zone administrator who represents the local economic development agency, city, or port, but can also be a college leader or someone in private industry. All of the administrators report carving time out of their existing schedules to conduct IPZ work because operating funds have been hard to come by. A variety of different approaches have been used to fund zone operations, including in-kind and

MAJOR CHARACTERISTICS OF IPZS

monetary donations and an all-volunteer workforce.



Introduction

IPZ PROGRAM IMPROVEMENT SUGGESTIONS BY STAKEHOLDERS

The IPZs were asked to identify the resources needed to advance their agenda. The following is a summary of the resources suggested by zone administrators and partners.

- **Cohesive long-term state strategy for IPZs** – Concerns were expressed that the IPZ program may be discontinued. This has tempered local enthusiasm for IPZs and created skepticism among donors and businesses about the future of projects.
- **Operating funds from the state** – A lack of state operating funds has hampered the ability of all of the IPZs to grow more rapidly.
- **Ongoing capital grants** – Over the last four years, \$6.5 million in state capital grant funds have been used to leverage other funds available from private sources, local jurisdictions, and the federal government to acquire property and embark on construction projects. Availability of capital funds will help to continue these efforts.
- **Creation of tax incentives** – Numerous stakeholders complained that IPZs were at a disadvantage relative other states in not being able to offer tax incentives to businesses.
- **Grant scoring advantages for IPZ projects** – One zone administrator suggested that preference be given to projects located in IPZ areas when they compete for state grant money.
- **Technical support for pursuing grants** – Many zone administrators reported that they do not have access to grant writers or in-house experts.
- **Greater coordination among IPZs** – Some stakeholders noted that the geographical nature of the program encourages competition between zones for resources. Multiple zones could potentially duplicate projects.
- **Promotion of the IPZs by the state** – Each zone could benefit from a program that promotes the program to businesses in other states and countries.

See Page 54 for the WEDC's recommendations.

Section 1: IPZ Case Studies

AEROSPACE CONVERGENCE ZONE Workforce Development Council Snohomish County

Founded:

2007

Zone Objective:

Aerospace training and research, technology transfer and commercialization, coordination of attraction, retention, and expansion efforts for aerospace

Partners:

- Future of Flight Aviation Center and Boeing Tour
- Economic Development Council of Snohomish County
- Snohomish County Office of Economic Development
- Snohomish County Executive's Office
- Workforce Development Council Snohomish County
- The Aerospace Futures Alliance of Washington
- All K-20 education in the county under the Blueprint Partnership

Summary of Activities:

The IPZ exists in order to protect and grow the aerospace economy in Snohomish County. Community leaders, government, education, industry, workforce development, and other IPZ partners have displayed strong support of this goal. The IPZ banner provides a place to unite and coordinate the various agendas of the organizations involved. The nonprofit Workforce Development Council acts as the zone administrator, with project leadership shared organically among the partner organizations. Leadership of specific projects usually goes to the partner that is most expert on the subject. The IPZ functions as a part of the larger economic development system. For example, the deputy development director for Paine Field organized the IPZ partners to support a new CERB application. Partners are included in each work group as each project matures and then the work group disbands.

The flexibility of the IPZ designation allows

the partners to react nimbly and work on a relationship basis rather than within a defined structure. The organization has been described as “Community Mobilization with an economic development focus,” working on projects where each of the organization’s agendas intersect. Conveners include the Workforce Development Council, the Economic Development Council, the colleges, airport management, the county’s Office of Economic Development, or the County Executive’s office, depending on topic area. The IPZ is conceptually more than just the research park taking shape as Washington Aerospace Training and Resource Center (WATRC), with results and efforts spread throughout the county.

The first goal of the group was to create a research and training center at Paine Field. The result of that effort is the WATRC managed by Edmonds Community College. WATRC hosts workforce training, research

“Community
Mobilization
with an economic
development
focus”

Section 1: IPZ Case Studies

AEROSPACE CONVERGENCE ZONE Workforce Development Council Snohomish County

Zone Administrator:

Mary Jane Brell Vujovic,
Workforce Development Council
Snohomish County

Contact Information:

(425) 921-3405

Facilities:

Washington Aerospace Training
and Resource Center (WATRC)
Paine Field, a combination of
office, classroom, and production
space.

Tenants:

Edmonds Community College
manages WATRC for the IPZ

State Capital Funding:

\$250,000 in 2009

and entrepreneurship training focused on aerospace and composite manufacturing. Strengthening the research component by featuring one or more four-year institutions is a goal. Communication and negotiation with several in-state institutions continues. WATRC opened within a year of conception in an existing building donated by Snohomish County. Remodeling using Federal Aviation Administration (FAA) and state IPZ grant funds included asbestos abatement. Boeing provided materials and machine tools for training.

WATRC began its first class in June 2010. Students learn a variety of aircraft and composite milling and manufacturing skills as part of 18.5 credit hour certification. WATRC also offers an 11-week entry-level program that can prepare a person with little knowledge for entry-level jobs at Boeing or a supplier, or entry into the full certification program. The center expects to offer training in aircraft electrical, hydraulics, quality assurance, and functional testing in the near future. These courses will vary in length and each will lead to a certification required to upgrade to a new position. On-line course curriculum is integrated with hands-on

training. This hybrid model is available for use by other colleges in the state. The program was designed to be scalable so that a round-the-clock and weekend schedule is possible. Recently retired aerospace machinists are recruited as instructors for the hands-on portion of the training.

IPZ Part of Larger Partnership

The IPZ dovetails with the Snohomish County Blueprint. The Blueprint is a broad partnership whose mission is to develop an integrated approach to education, workforce, and economic development in Snohomish County. Economic vitality is fostered by retaining and attracting jobs in nine industry clusters. The partnership creates many reports related to IPZ topic areas and serves as a starting point for discussing most new initiatives and



Section 1: IPZ Case Studies

AEROSPACE CONVERGENCE ZONE Workforce Development Council Snohomish County



A Washington Aerospace Training and Research Center student listens as facilitator Alex McEwen shows how he drilled plate aluminum. (Snohomish County Business Journal)



Washington Aerospace Training and Research Center students get a lesson in aluminum drilling technique from facilitator Alex McEwen on the center's first day of classes on June 9. (Snohomish County Business Journal)

industry recruitment and retention efforts. The Workforce Development Council, the same organization that acts as the IPZ zone administrator, manages the Blueprint. The Blueprint's 2003 launch was prior to IPZ designation.

The zone administrator estimates that \$40 million in training funds have come to the Snohomish County vicinity because of the efforts of various IPZ partners. The Economic Development Council of Snohomish County is happy with the success of the training center. The EDC would like to use the IPZ to conduct area marketing and establish a business incubator.

Another IPZ focus is green energy training with Cascadia, Edmonds, and Everett Community colleges. Both the Workforce Development Council and the various colleges involved say they strive to maximize the efficiency of training funds and help students complete the program, attain certification, complete programs, and find jobs. Seminars on developing a career plan are part of the overall training program.

The Future of Flight Foundation launched a

new education program and expanded the student exchange program, which trains apprentices in aerospace maintenance and restoration. Both projects address the need to foster careers and technical education programs in advanced manufacturing/machining for K-12 schools, as well as help to develop the local knowledge base in these fields. The new education program, Flights of Innovation, served 300 middle school students and 10 teachers from four school districts during the pilot. The program will expand in 2011 to increase middle school participation and expand into high schools.

Funding and Red Tape Pose Challenges

Challenges facing the IPZ include finding funds, and the ongoing work to bring additional research capacity to the IPZ and WATRC. Several partners found the state's IPZ application and grant process onerous and time consuming. Staff expressed concern that as budget cuts reduce partner organization staffing levels, and reduce staff capacity, that the time consuming nature of the process will discourage future participation. The zone administrator said that funding for IPZ operations would be helpful in conjunction with the IPZ designation to attract businesses.

Section 1: IPZ Case Studies

AEROSPACE CONVERGENCE ZONE Workforce Development Council Snohomish County



Ribbon Cutting Esterline

Boeing Supplier Moves to Snohomish

Esterline Corporation, and its Korry avionics products, is an important Boeing supplier. The company needed a new larger facility for its expanding operations. The company also sought lower costs, and considered moving out of state. Esterline contacted the EDC of Snohomish County in early 2008 to identify candidate sites. Snohomish County Airport responded with an attractive land-use opportunity at Paine Field costing \$.047 per square foot, as compared to \$2.50 per square foot to remain near its current location in Seattle.

The site also provided close proximity to the Boeing aircraft facility and other aerospace companies, a fast permitting process, a skilled local workforce, and a large amount of enthusiasm for the project from the community.

Esterline announced in March 2008 its decision to move operations and workers to Snohomish County. Construction of the new facility began in August 2008 and it opened September 2009. Snohomish County leased a 14-acre parcel on airport property to developer Capstone Partners, which built a 216,000-square-foot building and leased

it to the local Esterline subsidiary. Capstone Partners will pay Snohomish County \$289,000 a year for 55 years, demonstrating the significant investment of the property and permanence of the Esterline relocation.

The Esterline decision to move to Snohomish County was of significant value to the community: it kept an aerospace company that considered moving out of state here in Washington.



Governor Gregoire speaking at Ribbon Cutting ceremony for the new Esterline facility

Sources: *Mary Jane Brell Vujovic, Zone Administrator, Workforce Development Council Snohomish County; Larry Cluphf, Edmonds Community College; Bill Lewallen, Paine Field Deputy Director of Development; Donna Ambrose, Snohomish County Office of Economic Development; Deborah Knutson, Economic Development Council of Snohomish County; Snohomish County Business Journal July 2010*

Section 1: IPZ Case Studies

CENTRAL WASHINGTON RESOURCE ENERGY COLLABORATIVE Economic Development Group of Kittitas County

Founded:

2009

Zone Objective:

Alternative energy resources—
wind and solar

Partners:

- ED Group of Kittitas County
- Central Washington University
- enXco Development Corporation
- Puget Sound Energy
- Kittitas County

Zone Administrator:

Doug Sutherland, Economic
Development Group of Kittitas
County

Contact Information:

(509) 962-7244

Facilities:

None

Summary of Activities:

The energy collaborative is the newest IPZ, receiving designation in October 2009. The group's mission is to advance low-carbon technology by leveraging alternative energy resources in Kittitas County. The IPZ conducts operations through collaboration between the private partners: Puget Sound Energy is the largest private utility in Washington and enXco is the largest U.S. developer of wind and solar power. Governmental entities that assist in funding or operating the IPZ include Central Washington University, the local economic development office, and Kittitas County.

Central Washington has abundant wind and solar energy available for conversion into electricity. There are already functioning generation facilities at Wild Horse. Elsewhere in the county there are more permitted and under construction. The zone administrator estimates that within the next decade, there may be five projects of similar size to Wild Horse constructed in the area.

The IPZ has adequate operating funds for the next three to four years. The IPZ partners are working on a plan to create a research facility

in the future. The process of formalizing the relationships between partners is ongoing. Once that process is complete, the partners will engage in planning to determine the criteria for the research facility and financing plan. The IPZ expects to apply for capital grants at some future time for the research facility.



The Renewable Energy Center allows visitors to explore the latest technologies in wind and solar power, and learn about the Kittitas Valley.

Section 1: IPZ Case Studies

CENTRAL WASHINGTON RESOURCE ENERGY COLLABORATIVE Economic Development Group of Kittitas County

Tenants:

None

Regional Assets:

- CWU's Renewable Energy and Sustainable Technology Degree Program (2010 launch)
- Wild Horse Wind and Solar Facility – 9,000+ acres of wind and solar production owned by PSE in Kittitas County
- enXco, subsidiary to EDF Energies Nouvelle (France), an integrated renewal energy operator developing Desert Claim Wind farm (EFSEC approved)
- Two additional wind and solar facilities in various stages of production, construction or project review in the county
- Strong community will to develop the IPZ

State Capital Funding:

None

IPZ partners have pledged \$1.2 million of seed money and in-kind support for the first four years of operation. The IPZ plans a three-phase approach:

- Phase 1 – Governance and organization
 - * Board formation
 - * Hire an executive director
 - * Develop strategic relationships for research opportunities and with private sector partners
 - * Identify students with industry relevant experience for CWU's training program
 - * Market the program
- Phase 2 – Construction of a facility
 - * Determine needs (solar, wind, other)
 - * House the zone administrator, office and/or lab facilities for admin and potential business partners
- Phase 3 – Commercialization of renewable energy technologies generated from the IPZ

Puget Sound Energy owns and operates the Wild Horse facility, which has 149 wind turbines producing 273Mw of power and a 500Kw solar array. The site has dependable winds and enough elevation to be above the winter overcast on most days. The solar array powers the operations infrastructure for the wind farm during daylight hours. Puget Sound Energy received a \$50,000 training grant from the Workforce Development Council acquired through the IPZ.



At 500Kw, the Wild Horse solar array is the Northwest's largest demonstration project of photovoltaic technology, which turns sunlight into electricity.

Section 1: IPZ Case Studies

CENTRAL WASHINGTON RESOURCE ENERGY COLLABORATIVE Economic Development Group of Kittitas County



The grant funds incumbent worker training for turbine employees and rescue personnel on turbine safety and rescue procedures. Funds are also used for outreach to high schools on green energy topics, with an emphasis on the importance of science, math, and writing skills. Students also learn which higher education facilities in the state meet these educational requirements. Puget Sound Energy also participates in a community energy collaborative group with 22 members, fostering community awareness and helping small producers to interact with the grid.

enXco received state permitting approval for the Desert Claim project in February of 2010 and plans construction for spring 2011. Desert Claim will feature 95 wind turbines with a total capacity of 190Mw. Power delivery is expected beginning in late 2011 or 2012. Desert Claim is located eight miles northwest of Ellensburg. The project will operate as a regional power plant providing power to a variety of customers.

University Links R&D to Degree Program

Central Washington University through its research foundation fulfills the educational element of the IPZ. The foundation will serve as an intellectual resource enabling collaboration, development of technologies and commercialization. The university plans to focus the R & D training as a new undergraduate program in the Industrial and Engineering Technology Department. This bachelor's degree program is for mid-management wind farm managers directing operations and technicians. The school has submitted federal grant applications to establish the program. The program should be open in one to two years after funding is secured.

Section 1: IPZ Case Studies

CENTRAL WASHINGTON RESOURCE ENERGY COLLABORATIVE Economic Development Group of Kittitas County

“This is a very good idea, combining the strengths of each partner, and resources, the IPZ has a unique opportunity to grow a clean energy resource.”

The university’s IPZ labs could be included in a science building expansion plan if the IPZ partners choose that direction.

Central Washington is the first of the regional universities to receive “Safe Harbor” status from the state. This allows the free exchange of ideas with private business while providing legal protection of intellectual property for professors and graduate students. Previously only the research institutions obtained this status. The university feels that IPZ meetings offer an excellent forum for conversation between government, academia, and business to understand each other’s organizations processes and timing.

County Invests Sales Tax Dollars

Kittitas County is a significant partner in the IPZ. They have designated \$100,000 a year for five years for capital projects related to the zone. The funding is from economic development funds collected from sales tax in the county. The county would like to establish the IPZ as the center of alternative energy production for Washington state, including wind, solar and biomass sources in both large and small-scale projects. The wind, solar, and agricultural resources of the county

combined with the intellectual resources of the university provide a unique opportunity. Once the by-laws are in place, the IPZ will have a foundation and be ready to react to opportunities. The IPZ intends on pulling the community together around a cooperative agenda, benefiting students, faculty, workers, and private companies.

The private partners expressed enthusiasm about the IPZ. Noted one participant, “This is a very good idea combining the strengths of each partner, and resources. The IPZ has a unique opportunity to grow a clean energy resource.” However, concerns were raised about growing pains related to finalizing agreements between the partners – and the timeframes required to interact with government and academic bureaucracies.

Sources: Doug Sutherland, Zone Administrator; Roger Fouts, Dean of Graduate Studies CWU; David Steeb, enXco; Paul Jewel, Kittitas County Commissioner; Brian Lenz, Puget Sound Energy

Section 1: IPZ Case Studies

DISCOVERY CORRIDOR INNOVATION ZONE; STEINMUELLER INNOVATION PARK Columbia River Economic Development Council

Founded:

2007

Zone Objective:

Semiconductor and micro-device design, Integrated Chip manufacturing and processing, display technology and multimedia

Partners:

- WSU Vancouver
- Washington Tech Center
- Clark College
- Clark County High Tech Council
- Columbia River Economic Development Council

Zone Administrator:

Bart Phillips, President, Columbia River Economic Development Council

Contact Information:

(360) 567-1060

Private Sector Participation:

- Sharp Labs
- Sharp Microelectronics
- nLight Photonics

State Capital Funding:

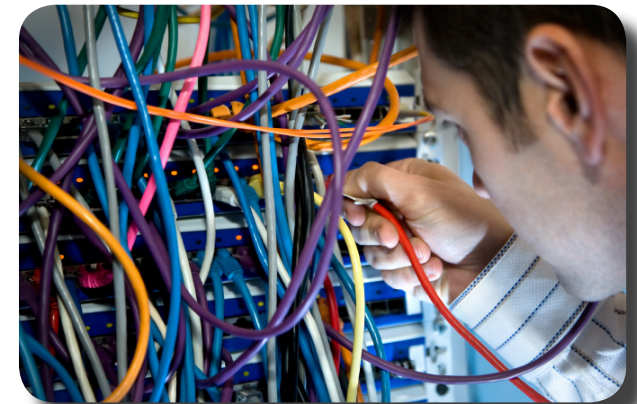
None

Summary of Activities:

The Vancouver IPZ has reported no outcomes or activity to date but fulfills its reporting requirement to the state. The IPZ plans to develop a research park on land adjacent to the WSU Vancouver campus. A parcel is available for donation subject to development criteria. The EDC, which acts as the zone administrator, has had interest from organizations to lease space in the research park once that property is developed. There are approximately \$500,000 in pre-development costs that need funding for site planning and permit work prior to any land transfer. Completion of the pre-development work would remove uncertainty about the future of the property.

The IPZ designation is beneficial to the WSU Electrical Engineering program and its connection to the high-technology community. The IPZ has also been effective as a planning vehicle for the Discovery Corridor. For example, the zone has secured a pledge of \$1 million from Clark County for future infrastructure projects related to a research park once the project moves forward. The economic downturn and lack of

state funding have stalled IPZ progress. The zone administrator and partners expressed disappointment with the lack of further IPZ



funding from the state, and funding flexibility. The education partner, WSU Vancouver, reports that the zone designation is helpful for the school and efforts to expand technical programs. The IPZ allows for focused discussions within the framework outlined by the IPZ. The zone serves as an asset in the long-term development process for campus facilities. This planning has helped prepare for growth opportunities that may come after the current economic downturn.

Sources: Bart Phillips, Zone Administrator; Jennifer Crooks, WSU-Vancouver Foundation; Lynn Valenter, WSU-Vancouver Finance and Operations

Section 1: IPZ Case Studies

GRAYS HARBOR SUSTAINABLE INDUSTRIES INNOVATION PARTNERSHIP ZONE Port of Grays Harbor

Founded:

2007

Zone Objective:

Green and sustainable industries

Partners:

- Port of Grays Harbor
- Grays Harbor Public Development Authority: Satsop Development Park
- Grays Harbor College
- Grays Harbor EDC
- Pacific Mountain Workforce Development Council
- Imperium Renewables
- Paneltech International
- Wishkah River Distillery

Summary of Activities:

The first project undertaken by the IPZ is to create the Sustainable Industries Research & Development Center and a small business incubating facility at the Port of Grays Harbor. The IPZ received \$1 million at the time of designation in 2007 to build the lab and incubation space. That funding, leveraged with a 2010 federal Small Business Administration (SBA) grant (\$427,500), allowed acquisition

of a 20,000-square-foot building on port property. The lab space is under construction in the building, which is located next to port offices.

The first small business in the incubator, a craft distillery, will occupy 2,500 square feet in November 2010, with the lab space opening in April of 2011.



Washington State Governor Christine Gregoire with Paneltech owners, managers and Grays Harbor port officials on her visit to the Paneltech plant in Hoquiam in the Grays Harbor IPZ

Section 1: IPZ Case Studies

GRAYS HARBOR SUSTAINABLE INDUSTRIES INNOVATION PARTNERSHIP ZONE Port of Grays Harbor

Zone Administrator:

Mary Nelson, Port of Grays Harbor

Contact Information:

(360) 533-9504

Facilities:

R&D Incubator
Port Industrial Park

Tenants:

- Wishkah River Distillery
- Paneltech International
- Imperium Renewables

State Capital Funding:

\$1,000,000 in 2007

The director of the local small business development center attends all IPZ meetings. The WSU-funded program expects to be involved in mentoring small businesses located in the incubator.

The IPZ is establishing a regional partnership to capture industrial byproducts as resources and share research and development efforts among a group of companies. The IPZ encourages local industry to recycle and utilize byproduct materials in their production processes. For example, Grays Harbor Paper generates green paper byproducts that have been used by Paneltech in the

manufacturing of their products. Glycerol is a byproduct of the Imperium Renewables biofuel manufacturing process. Paneltech is researching uses for glycerol as an input in their manufacturing process. In addition, a byproduct of the Paneltech manufacturing process is ethanol – a raw material used by Imperium. The close proximity for sourcing resources and materials can create operating efficiencies, and reduce transportation costs, creating a sustainable local industrial cycle.

Both Imperium and Paneltech want a local R&D facility for developing sustainable manufacturing solutions. Imperium has a



Imperium Renewables biodiesel production facility in the Grays Harbor IPZ

Section 1: IPZ Case Studies

GRAYS HARBOR SUSTAINABLE INDUSTRIES INNOVATION PARTNERSHIP ZONE Port of Grays Harbor



Roy Nott of Paneltech International and the Grays Harbor IPZ

three-to-five year timeline for creation of a new biomass-based fuel production process. This will require research on application of existing technology to the biofuel process. Their sustainable products require continual research in order to lead in global markets. Due to their rural location, they recognize the value of creating a collaborative research facility and incorporating educational institutions and public resources. Both Imperium and Paneltech are tenants of the Port of Grays Harbor in the port industrial area, which shares boundaries with the IPZ.

Biofuels Company Experiences Growing Pains

Imperium constructed a 100 million gallon (annual) biodiesel production facility in 2007. The company produces biodiesel from ethanol- and vegetable-based feedstocks. Imperium closed operations during 2008 and re-opened in early 2009. The shutdown was due to the rise in the costs of vegetable oils and European tariffs that damaged Imperium revenues and ability to produce biofuels cost-effectively. Imperium (which was Seattle Bio-Diesel) now operates as a “contract manufacturer” of biofuels through a partnership with a Canadian company. The plant operates at full capacity one to two

weeks a month in order to fill orders. There is demand for their glycerol byproduct but the future of the global biodiesel market is uncertain. Canadian and Oregon biofuel content laws are important to maintaining demand for Imperium biodiesel.

Imperium had to lay off the company’s entire research team during the economic downturn. However, Imperium is committed to continuing its work with the IPZ. The company argues that making the current technology work is important before moving on to the next step of developing biomass feedstocks to augment or replace vegetable oils. Their plan is to work within the IPZ to develop a pilot production plant (under 1 million gallons, expand that to a demonstration size (more than 1 million gallons) and then determine the most efficient way to scale production for larger market demands. Through R&D they hope to validate the technology and process, seek USDA or other federal financing, develop biomass streams from timber industry waste products, and produce fuel and chemicals. Imperium is working with the national laboratory and both research universities on this project.

Section 1: IPZ Case Studies

GRAYS HARBOR SUSTAINABLE INDUSTRIES INNOVATION PARTNERSHIP ZONE Port of Grays Harbor



Paneltech International makes eco-friendly building materials. These include countertops (“PaperStone”), siding, and flooring for industrial, commercial, and residential construction; composite armor; and plywood overlays for the construction industry. Paneltech strongly supports the IPZ concept and the R&D facility. The company is a leader in the development and production of petroleum-free resins into strong, rigid, composites and bio-composites made from resins and recycled paper, Kevlar, and glass fiber. It produces a green-certified bio-composite used in a wide range of construction applications. Their composite armor protects against explosively formed projectiles (shrapnel from IEDs and bombs) by absorbing the projectile’s energy and stopping it.

Wishkah River Distillery is a start-up craft distiller that will lease 2,500 square feet in the IPZ facility. They will produce 500-gallon batches of vodka, whiskey, and gin using a minimum of 51 percent Washington-grown agricultural products. Besides the proprietor, they expect to hire one person in approximately six months and grow to a staff of three to five people over time. If successful, they hope to move from the IPZ incubator at

some point to larger facilities.

College Hosts Training Opportunities

Grays Harbor College expects to provide interested chemistry students to the lab and companies for internship and work experience. The college will host training opportunities for the small businesses in the incubator, and expects the zone to provide opportunities for college instructors to collaborate with local business. Another benefit of the IPZ is an increase in student interest in chemistry and engineering courses.

The IPZ administrator continues to seek collaborative opportunities with other research entities, additional private-sector partners (possibly Westway Terminals and Grays Harbor Paper), and potentially create partnerships throughout the state to further enhance the utilization of resources. The IPZ is also interested in expanding its boundaries to include the former Satsop energy site at some time in the future.

Sources: *Mary Nelson, Zone Administrator; Todd Ellis, Imperium Renewables; Sid Watts, Imperium Renewables; Roy Nott, Paneltech; Tim Gibbs, Grays Harbor EDC; Mark Reisman, Dean of Institutional Research GHC; Sue Watts, Wishkah River Distillery; Eric Stewart, WSU Small Business Development Center*

Section 1: IPZ Case Studies

NORTH OLYMPIC PENINSULA INNOVATION PARTNERSHIP ZONE Clallam Economic Development Council

Founded:

2007

Zone Objective:

Marine Biotechnology – specifically, tidal wind and energy and oceanic biomass development

Partners:

- Pacific Northwest National Laboratory
- Clallam County Economic Development Council
- Peninsula College
- Battelle Marine Laboratories (PNNL)
- City of Sequim
- Port of Port Angeles
- Clallam County
- Jefferson County
- Olympic Finance Development Authority

Summary of Activities:

The North Olympic Peninsula IPZ plans include a business incubator, identified industry clusters, instruction at Peninsula College, the Olympic Workforce Development Council, and Pacific Northwest National Laboratory's renewable energy plan including biotechnology and wind/wave/tidal power.

The IPZ has received no capital funding. At this point, no business placement can be directly attributable to the Innovation Partnership Zone's activities. The long-term goal is commercialization of both the regionally viable intellectual properties emanating from the lab and local innovators not associated with the lab.

The main component of the IPZ is the Pacific Northwest National Laboratory (PNNL) marine sciences lab. The lab is located on a 140-acre campus on Sequim Bay. Over 40 years about seven acres have been developed. The laboratory's location outside the Urban Growth Area (UGA) for Sequim has reduced the ability of the city to provide services and limited the lab's ability to grow and evolve. Recently, the city annexed the laboratory

campus into the city limits. Annexation has allowed the process of providing city sewer and water services to begin. Having city services will allow PNNL to collaborate with the city, the Port of Port Angeles, and private companies and to act as an incubator location for businesses without concerns of negative impacts on the environment. The city plans completion of service the links by 2012.

One challenge to this process is lack of funding to build the utilities out to the PNNL location. The lab is able to pay their share but other users will need to be included in plans.



The Sequim Marine Research Operations site encompasses 150 acres of uplands and tidelands, about 7.5 acres of which has been developed for research operations

Section 1: IPZ Case Studies

NORTH OLYMPIC PENINSULA INNOVATION PARTNERSHIP ZONE Clallam Economic Development Council

Zone Administrator:

Linda Rotmark, Clallam County
Economic Development Council

Contact Information:

(360) 457-7793

Facilities:

No facilities specific to the IPZ, PNNL, and Peninsula College and the Clallam EDC are providing meeting space and the Sequim Marine Science Laboratory is considered the “home” of the IPZ

Tenants:

None

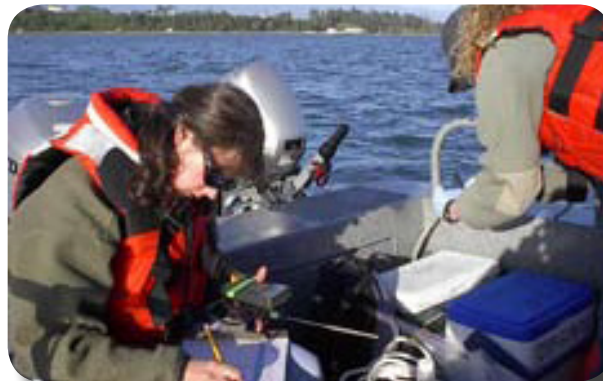
State Capital Funding:

None

The laboratory facility focuses on tidal, wind, ocean thermal, and wave energy. They are also researching marine biofuels, land geo-thermal energy, and biomass energy production in addition to other work. The potential to develop a marine energy cluster is enormous. The tidal flows around the Olympic Peninsula represent some of the most concentrated marine energy potential in the country. Harnessing tidal energy and developing oceanic biomass systems will involve years of research and development.

Regional Energy Cluster Envisioned

PNNL, Peninsula College, and the Clallam EDC are discussing building a “road map” to illustrate the development of a marine energy cluster for the region. The road map



PNNL researchers are collecting water from Dungeness Bay for the microbial-source-tracking study

concept is the first collaborative idea that the Clallam EDC has to work on directly with the lab. However, the EDC participated in an indepth commercialization process in 2008 with Washington Manufacturing Services (now Impact Washington) that included 17 new innovations tested for viability. Funding and planning for the road map are the subject of recent grant discussions by the Clallam EDC.

The IPZ commits the PNNL staff to interact with the Clallam EDC and its partners in a non-grant driven manner. Through the IPZ, the lab is discussing potential economic development opportunities with the EDC and other partners, including the lab director making frequent appearances at community meetings to discuss possible future work. Furthermore, the existence of the IPZ has shown PNNL and the Federal Department of Energy (DOE) the commitment of the local community to support the laboratory and research. This is cited as a positive element in grant applications.

The zone administrator reports that the IPZ designation has energized the region in how it views economic development. IPZ activities include identification of business service

Section 1: IPZ Case Studies

NORTH OLYMPIC PENINSULA INNOVATION PARTNERSHIP ZONE Clallam Economic Development Council



Scientist at PNNL's Marine Sciences Laboratory in Sequim, WA

partners, working with Olympic Venture Group, exploration of a finance development authority, and working with PNNL's office of Tech Transfer. PNNL and the IPZ host meetings with local leaders and innovators who describe the tools and services they can provide and build consensus among partners developing an economic vision. The Olympic Venture Group is a 20 member, two-county investment group working with local projects as potential investors and mentors.

Meanwhile, PNNL is working with Nippon Industries in Port Angeles on the use of biomass in their paper mill. This includes available slash feedstocks from the timber industry, and may include other biomass feedstocks in the future.

PNNL algal biomass research divides into two areas: macro, and micro algae. Kelp is a macro alga representing an opportunity to grow large amounts of biomass for conversion into energy. Micro-algae have high lipid content (fatty material) that may be converted into fuel sources. The research centers on identifying algal strains and their associated growing characteristics including temperature, light, water quality, etc. The aviation industry

is interested in this as a source of biofuel to comply with future regulations in the European Union. Geothermal and tidal energy production technologies are used in Europe.

Next Step: Develop Road Map

The road map is the next step for the IPZ. This work, in concert with the City of Sequim utility connection to the lab, will largely occupy the next few years. However, the IPZ is also working on an RFP process to conduct a wind demonstration project with PNNL from the Department of Energy. People from a four-county region (Clallam, Jefferson, Kitsap, and Mason) are forming the Olympic Finance Development Authority, a new potential partner in developing commercial opportunities with PNNL technology. The authority can act as a deal structuring agent providing expertise for public, private, and public/private projects. The five to 10-year goal is to provide incubation opportunities on the campus and on adjacent port of Port Angeles property.

Sources: Linda Rotmark, Zone Administrator and Clallam EDC Executive Director; Dr. Charles Brandt, Director for PNNL Marine Sciences Laboratory

Section 1: IPZ Case Studies

PULLMAN INNOVATION PARTNERSHIP ZONE Port of Whitman

Founded:

2007

Zone Objective:

Clean, energy-efficient IT and data center technologies

Partners:

- The Port of Whitman
- SprayCool Corporation
- Green Information Technology Alliance (GITA)
- Washington State University
- Pacific Northwest National Laboratory (PNNL)

Zone Administrator:

Joe Poire, Executive Director, Port of Whitman County working with Don Tilton, who also operates GITA

Contact Information:

(509) 397-3791

Summary of Activities:

The Pullman IPZ operates the Clean Technology Center of Excellence, a co-location facility for emerging clean technology companies. The primary leaders are the port and Green Information Technology Alliance (GITA), a nonprofit organization dedicated to accelerating the integration of green, energy-efficient IT technologies into sustainable building architecture. GITA acts as a conduit for membership and donations. GITA received donations in the first year of operation, but there has been no recent activity. The IPZ draws on the WSU College of Engineering and Architecture, and works with Pacific Northwest National Laboratory (PNNL). Zone partners report that the best element of the IPZ is the ability to foster entrepreneurship and encourage technology startups; they would consider one or two startups a year to be successful for the zone.

The IPZ has undertaken demonstration projects using green technology, including solar, wind, “thin client” computing, green grid computing, ornamental cooling pond, living roofs, weather monitoring, and data collection. Fifty-four solar panels are

connected to an inverter and battery backup that has allowed testing of new system architectures. The solar system provides 70 percent of the power used by the IPZ’s supercomputer.

The Thin-Client Computer Lab has tested two cloud computing architectures for energy efficiency and a graphics adapter for solar power compatibility. The Green Grid Computing Supercomputer cluster is connected to WSU Pullman, other campuses, and PNNL. The technology center’s building features an ornamental cooling pond, living roofs, and weather data collection equipment as part of an interpretive walk. The walk features interactive displays demonstrating the new technologies.



Ornamental Cooling Pond

Section 1: IPZ Case Studies

PULLMAN INNOVATION PARTNERSHIP ZONE Port of Whitman

Facilities:

The Pullman IPZ includes the Port of Whitman County's Pullman Industrial Park and the WSU Research and Technology Park (100 acres with a common border)

Tenants:

- GITA
- Palouse Energy Systems
- Spraycool
- Digilent
- Ecowell
- Palouse Research and Development
- Merry Cellars Winery
- Galexis Technologies

State Capital Funding:

\$1,000,000 in 2007

A \$1 million state capital grant assisted with these projects as well as land acquisition. Port contributions, local funds, and in-kind assistance have also added to the projects. The IPZ's administrators expressed frustration that the initiative's promise is unrealized due to the difficulty of securing operating funds.



Solar Powered Irrigation System

There have been no donations to the nonprofit, no funding from partners, and no funding in the recent state IPZ grant cycle. In addition, the economic downturn has resulted in a contraction of projects, including the relocation of RJR Solar to a location outside of the IPZ facility.

Collaboration has been uneven with this IPZ. The private start-ups have conducted research and grown. However, activity involving the university and the laboratory is minimal. At the outset, both were enthusiastic but the

zone administrator indicates that it has been difficult to get resources or interest from either on projects. For example, WSU manages the schedule for the IPZ supercomputer but the university is unable to fund maintenance or electricity costs.

Private Startups Show Promise

The private startups housed at the technology center – Ecowell, Galexis, Digilent and ATP Beverage – are growing and making headway in their projects. Each added one or two staff members in the last year.

Ecowell is a WSU startup that makes container-less, waste-free vending machines. The company has begun installation of their vending machines in the Western US. They have raised over \$750,000 in startup funds to date and are in discussions with venture capital firms for an additional \$500,000 to \$5 million in order to expand operations.

ATP Beverages is a WSU startup making a two-part energy drink and acting as the lab for Ecowell. The company expects to receive an additional \$40,000 in private financing that will allow installation of a new beverage laboratory space.

Section 1: IPZ Case Studies

PULLMAN INNOVATION PARTNERSHIP ZONE Port of Whitman



Clara Supplements is a WSU startup offering natural supplement product called “Study Boost” intended to improve brain function. The company hopes to market it as an alternative to ADHD medicine abused by students. All three companies are collaborating on distributing beverages and supplements in the Ecowell vending machine.

Galexis Technologies is an IT consulting firm with five employees, working on solar-powered telecommunications towers to expand access to broadband to rural areas.

Digilent, Inc. is an electronics company involved with the design, manufacturing control, and distribution of circuit boards for educational use. The boards are used for prototyping circuits for Electrical Engineering and Mechanical Engineering students in a classroom or lab setting in order to learn fundamental skills. The software-controlled boards allow real-time testing and experimentation with robotics and other mechanical processes.

GITA Chairman Don Tilton acts as an “entrepreneur in residence,” who is closely involved with the companies working toward

connecting all of the tenants with ways to leverage their assets. The zone administrator continues to work with WSU on fully using the capacity of the supercomputer. To that end, the IPZ has offered 10,000 square feet of space to house professors and laboratory space related to the supercomputer.

Potential Next Steps for Pullman IPZ

The following projects are under consideration subject to adequate funds:

- Rural Broadband Wireless Access/ Subscriber Computing with partners GITA, Galexis, First Step Internet, and Safedesk, intend to develop a commercial product for Galexis.
- Biofuel backup generators with partners (Port of Whitman)
- Renewable energy powered computer labs for schools with partners GITA, Pullman School District, RJR Solar, Galexis
- Server heat reuse with partners GITA and Galexis

Sources: Joe Poire, Zone Administrator, Port of Whitman; Don Tilton, Chairman of GITA; Terry Lawhead, Dept. of Commerce; Clint Cole, Digilent CEO and WSU professor

Section 1: IPZ Case Studies

SOUTH LAKE UNION GLOBAL HEALTH INNOVATION PARTNERSHIP ZONE City of Seattle

Founded:

2007

Zone Objective:

Advance partnerships, collaboration, education, economic and commercialization opportunities in the global health sector

Partners:

- City of Seattle, Office of Economic Development
- PATH (originally the Program for Appropriate Technology in Health)
- University of Washington, School of Medicine
- Washington Global Health Alliance (WGHA)

Zone Administrator:

City of Seattle, Tina Vlasaty

Contact Information:

(206) 684-3348

Summary of Activities:

From 2009-2010, the private-sector businesses within the IPZ invested approximately \$741 million in their global health ventures. These funds came from a variety of sources including large private donations, state grants, federal research grants, grants from nonprofit institutions, and contracts for research with national organizations.

The new Gates Foundation campus will employ approximately 1,200 people. The Institute for Systems Biology expects to add 200 more employees over the next 10 years. PATH has over 300 employees at South Lake Union and expects to add 22 new employees in 2010, and Seattle BioMed expects to grow by between 25 and 75 new employees within the next year. A total of 91 licenses or patents were secured within the IPZ last year. These include 78 by the University of Washington, five by Fred Hutchinson Cancer Research Center, and four each for the Seattle Biomedical Research Institute and the Institute for Systems Biology.

To date, the majority of financing has been secured through the actions of individual organizations and businesses located within the IPZ. There is no centralized finance data or IPZ funding plan relating to public and private capital or operating sources the IPZ is seeking. The initial needs of the IPZ are related to administration and economic impact analysis (Global Health Mapping Study). That study did not qualify for grant funding within the state's competitive grants, which emphasize capital projects and associated infrastructure.



Credit PNNL

Section 1: IPZ Case Studies

SOUTH LAKE UNION GLOBAL HEALTH INNOVATION PARTNERSHIP ZONE City of Seattle

Facilities:

South Lake Union IPZ

Tenants:

Not applicable, the IPZ does not lease buildings

State Capital Funding:

None

The partners reported that without accompanying resources or an associated policy framework, the designation of the IPZ as a geographic area has a limited effect in advancing the development of the global health sector. For example, most of the accomplishments reported to date by the IPZ are attributable to the organizations within the IPZ and not a direct result of the IPZ. Although there was a competitive grant program offered by the state, it focused on capital construction and the associated criteria excluded projects that were a priority to this IPZ but not within the grant criteria.

Business Participation in IPZ Grows

Seattle BioMed initiated a Phase 1 clinical safety trial – the first test in human volunteers – of its investigational genetically engineered whole parasite malaria vaccine candidate.

Meanwhile, the University of Washington Institute for Health Metrics, in coordination with Queensland and Harvard Universities, has discovered new techniques to check the completeness and accuracy of databases that compile information from death certificates. These records help to guide public health priorities.

The world's largest school lunch program, Akshaya Patra, collaborated with PATH to bring the benefits of rice fortification to more than 185,000 public school children each day for the 2010–2011 school year.

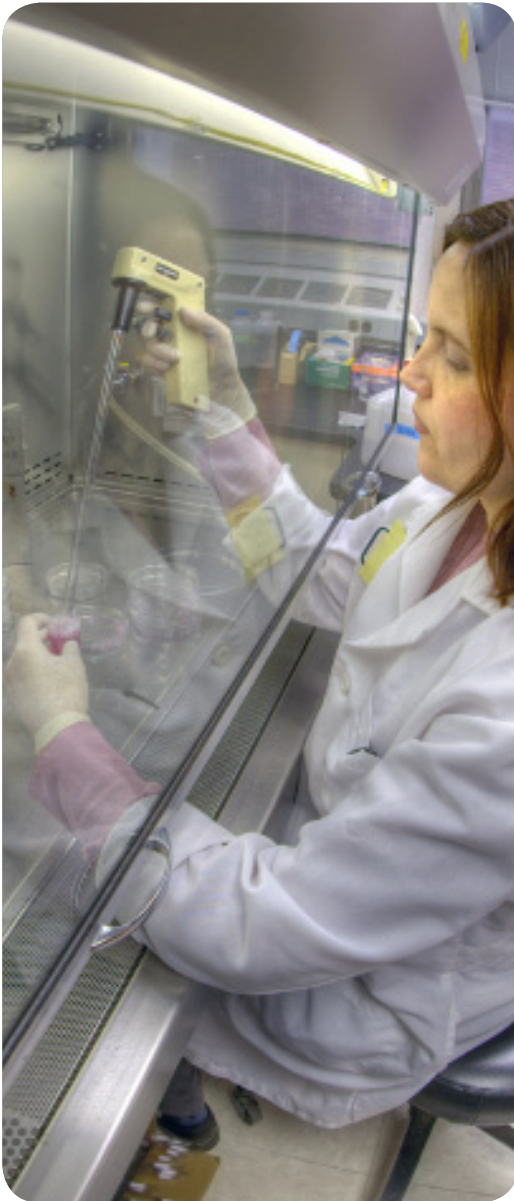
A team at Fred Hutchinson Cancer Research Center discovered the earliest steps of a common form of Muscular Dystrophy. The work creates a new therapeutic target for scientists working on treatment or cure for the disease.



Researchers at Fred Hutchinson Cancer Research Center, Group Health Research Institute and the University of Washington schools of Public Health and Pharmacy

Section 1: IPZ Case Studies

SOUTH LAKE UNION GLOBAL HEALTH INNOVATION PARTNERSHIP ZONE City of Seattle



have been selected to lead four projects for comparative-effectiveness research in cancer. This will be funded by \$16 million in federal stimulus funding.

AttoDx, Inc. has signed an exclusive license agreement for molecular viability testing technology developed at the University of Washington and Seattle BioMed.

Battelle is currently engaged in four public health projects internationally:

- A community intervention study in Zimbabwe to reduce HIV/STD risk,
- Evaluation of a program in Zimbabwe that provides support to HIV AIDS infected children,
- Assessment of the factors that affect circumcision use in Zimbabwe as an approach to reduce HIV/STDs, and
- Development of models to assess hearing loss and auditory functioning of workers in China exposed to industrial noise.

A report, led by the Global Alliance to Prevent Prematurity and Stillbirth (GAPPS), with support from the Bill & Melinda Gates Foundation and Seattle Children’s Hospital,

identified the global impact of preterm birth and stillbirth. Additionally, it outlines the urgent need for increased focus and attention on research. In collaboration with Seattle Children’s Research Institute, the Global Alliance to Prevent Prematurity and Stillbirth (GAPPS) is making quality data and biological samples from pregnant women and newborns easier to obtain.

A Shift to Global Health

The IPZ has shifted its orientation from life sciences to global health and is working with the Washington Global Health Alliance to advance global health ventures. The IPZ partners are working with the Global Health Alliance on educational and analysis initiatives to develop global health leaders and advance initiatives for growth, collaboration, and commercialization within the global health sector. A central component of future work includes completing an economic impact analysis of the global health sector and using the results to connect global health opportunities with Washington based companies.

Sources: Tina Vlatsy, City of Seattle

Section 1: IPZ Case Studies

SPOKANE UNIVERSITY DISTRICT INNOVATION PARTNERSHIP ZONE Greater Spokane Inc.

Founded:

2007

Zone Objective:

University District expansion and improvement

Partners:

- Avista Corp.
- City of Spokane
- Community Colleges of Spokane
- Downtown Spokane Partnership
- Eastern Washington University Spokane
- Greater Spokane Incorporated
- Institute for Systems Medicine
- Sirti (formerly Spokane, Intercollegiate Research and Technology Institute)
- Spokane Area Workforce Development Council
- Washington State University Spokane
- Washington State University Applied Sciences Laboratory

Summary of Activities:

The Spokane University District IPZ is administered by Greater Spokane Incorporated (GSI).

The zone is centered on the development of the University District as a center for higher education, revitalization, and job enhancement. The theme of the IPZ is “Near Nature. Near Perfect. Near Knowledge.” The hub of the University District is the Riverpoint Campus.

The IPZ was instrumental in the formation of a university data center available for use by all zone partners. The data center is located in the Phase 1 Classroom Building on the Riverpoint Campus.

The Downtown Spokane Partnership (DSP) operates as the manager of the University District. The DSP has assigned a staff member to coordinate district activities, manage the district database, and focus on infrastructure planning needs. The coordinator also serves as staff to two other organizations, the University District Development Association and the University District Advisory Council. The council grew out of a grassroots effort

to revitalize the district and serves as the main conduit from the other bodies to the community, gathering opinions and sponsoring activities. The district features a large concentration of hospitals, medical research facilities, and institutions of higher education.

The Development Association is a 501(c)3 with a 15-member board that includes the mayor of Spokane, the presidents of Washington State University Spokane, Eastern Washington University Spokane, Gonzaga University, Whitworth University, and community colleges of Spokane, and is intended to lay a foundation for a future Local Improvement District.

Four universities hold classes in the district (WSU Spokane, EWU Spokane, Gonzaga, and Whitworth). The joint community college administrative offices are located there but no community college classes are held.

The zone partners are working to establish a full medical school in the University District. Beginning in 2008, medical students

Section 1: IPZ Case Studies

SPOKANE UNIVERSITY DISTRICT INNOVATION PARTNERSHIP ZONE Greater Spokane Inc.

Zone Administrator:

Robin Toth

Contact Information:

(509) 321-3636

Facilities:

The Spokane University District,
Downtown Spokane

Tenants:

None

State Capital Funding:

\$1,000,000 in 2007

completed the first year of their education in the district. Following year one, med students transferred to the UW Seattle Campus for year two. Many return for residency after completing coursework in Seattle.

The IPZ partners have used federal and state grant funds for pre-design work for a medical school building within the zone. The expected cost of construction is \$80 million, and the full medical school could be open as soon as 2013 pending identification of resources. The UW, in partnership with WSU-Spokane, operates the medical school.

In support of this project, the WSU Board of Regents designated WSU Spokane as the school's health sciences campus. The zone

administrator reports that the medical school project is possible because of the combination of academic institutions, and the research activities and other assets of the IPZ.

Data Center is Backbone of IPZ

State capital grants are also important to the zone. For example, the IPZ used \$955,000 in state capital grant funds, matched with WSU Spokane funds, to locate a research data center in the Phase 1 building of the IPZ. All of the IPZ partners, government, academic, and nonprofit, are eligible to use the data center. EWU Spokane also uses the data center as a back-up location for their main campus data system in Cheney. The data center administrator reports that it is operating at 75 percent capacity by supporting



Washington State University Spokane Campus

Section 1: IPZ Case Studies

SPOKANE UNIVERSITY DISTRICT INNOVATION PARTNERSHIP ZONE

Greater Spokane Inc.



research, the schools of pharmacy, education and nursing, and the Institute for Systems Medicine, plus providing data back up for Eastern and Sirti.

Sirti, formerly known as the Spokane Intercollegiate Research and Technology Institute, reports that the existence of the data center helps in marketing the University District to potential clients. The data center fully meets federal HIPAA requirements for patient record privacy.

Sirti is a Washington state economic agency focused on accelerating the development and growth of innovative technology-based companies in the Inland Northwest. Through a collaboration of business, higher education, and government, Sirti fosters an environment where entrepreneurs and small startups can flourish and high-growth companies can focus on their efficient growth. Sirti operates a technology center and assists over 60 active clients. Two of the Sirti tech center clients are Reliant RX and Revita.

A Tale of Two Sirti Clients

ReliantRX is a closed pharmacy (they do not serve the public directly) and has been located



The Sirti Technology Center

in the technology center for over three years. Their clients are nursing homes and other health care facilities. They use technology to manage patient records and record all medication management for doctors and health care providers. Their software prevents drug interactions, tracks medication, and provides picture representations of pills, at the time of use, to help prevent mistakes. ReliantRX has 40 employees in the technology center. The company is growing rapidly and is a candidate to use the IPZ data center in the future.

Revita operates physical therapy clinics that combine standard therapies with elements

Section 1: IPZ Case Studies

SPOKANE UNIVERSITY DISTRICT INNOVATION PARTNERSHIP ZONE Greater Spokane Inc.



of chiropractic in order to alleviate back pain. The goal of the clinics is to help patients recover from back injuries without surgery. Revita is undergoing case study review by Alleghany General Hospital to determine the efficacy of treatment. It is Revita's intent to expand the existing clinic and to open clinics in Seattle and other locations in the state.

IPZ's Research Focus Attracts McKinstry

McKinstry is in the process of renovating a railroad facility building as their Eastern Washington headquarters. McKinstry was attracted to the IPZ because of the collection of academic and research organizations in one area.

Meanwhile, a professor at the WSU School of Nursing is conducting research related to medical records. The local Health Science and Services Authority funds the project. A local sales tax authorized by the Legislature funds the Authority. Other partners in the study are the IPZ data center, and the Institute for Systems Medicine. They are creating a clinical data depository by entering all details of patient charts, not just the usual "highlights." This creates a searchable database for use by researchers to identify trends in treatments

and outcomes. Researchers can also make comparisons of the efficacy of different procedures and medicines. The project is opening new avenues in medical research and potentially lowering costs and time requirements for research questions. The data center is undergoing firewall testing to ensure HIPAA compliance.

The biggest challenge facing this IPZ has been locating the capital funding for the medical school building, and the operating funding needed to expand medical school instruction beyond the first year.



Sources: Robin Toth, Zone Administrator; Brandon Betty, University District Development Association; Linda Hemingway, Sirti; Larry Hoffman, WSU-Spokane; Barb Chamberlin, WSU-Spokane

Section 1: IPZ Case Studies

TRI-CITIES RESEARCH DISTRICT Port of Benton

Founded:

2007

Zone Objective:

Bio-tech and energy

Partners:

- WSU Tri-Cities (WSU-TC)
- Port of Benton
- Columbia Basin College
- Benton Franklin Workforce Development Council
- Pacific Northwest National Laboratory (PNNL)
- YAHS GS LLC
- Western Sintering Co., Inc.
- Science Applications International Corporation
- Moravek Biochemicals, Inc.
- Isoray Medical
- Innovatek, Inc.
- Areva NP
- Surgical Implant Generation Network
- Energy Northwest

Summary of Activities:

The Tri-Cities Research District is a 1,700-acre area located in North Richland that is home to Pacific Northwest National Laboratory (PNNL), WSU Tri-Cities (WSU-TC), the Port of Benton, Hanford contractors, other federal and state agencies, and approximately 80 Richland businesses. More than 7,000 people work in the area, which contains approximately 3.4 million square feet of office, laboratory, and light industrial and manufacturing space.

PNNL is the anchor tenant and numerous small technology businesses have spun out and located within the zone. The level of innovation as measured by patents is robust in the zone (over 200 US and foreign patents applied for or granted). PNNL receives over \$1 billion of research funding and the district's 80 businesses are primarily technology research oriented.

The IPZ and the Port of Benton are leveraging this concentration of assets via plans for developing residential and leisure activities within the zone. The IPZ received \$275,000 in capital grant funds to build two "Tri-Cities Research District" signs (fixed, brick

structures) at entry points, pave, and install underground electrical lines on the primary road (University Drive) into the zone. The IPZ leveraged \$155,000 of the capital grant funds with federal stimulus, port, and City of Richland funds for a total investment of \$2.4 million for infrastructure and road construction.

The plans for the zone campus include developing green spaces for common areas, additional infrastructure to accommodate increased population, commercial retail, building additions by PNNL and WSU-TC, a science and technology high school, and residential housing. Permits have been issued for 40,000 to 70,000 square feet of new construction by Innovation Center at TCRD, LLC, with an additional 100,000 square feet planned.

Another 10,000 square feet of commercial development is under consideration. The port has just received a \$200,000 grant from the local council of governments to connect the WSU-TC and PNNL campuses with sidewalks. The City of Richland is leading a broadband

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TRI-CITIES RESEARCH DISTRICT Port of Benton

Zone Administrator:

Diahann Howard, Port of Benton

Contact Information:

(509) 375-3060

Facilities:

Tri-Cities Research District

Tenants:

- Pacific Northwest Laboratory (PNNL)
- WSU Tri-Cities (WSU-TC)
- Port of Benton
- Hanford Contractors
- Other federal and state agencies
- Approximately 80 Richland businesses

State Capital Funding:

\$275,000 in 2007

\$250,000 in 2009

construction project beginning in January 2011 to enhance the ability to recruit firms into the zone. The IPZ received \$250,000 for capital funding to develop their broadband capability.

The IPZ plan includes raising funds to develop a port building to bring together PNNL, industry, and the WSU/PNNL Bio Products, Sciences and Engineering Laboratory (BSEL). This IPZ includes a “STAR Researcher,” Brigitte Ahring. Dr. Ahring is the Battelle Distinguished Professor of Chemical Engineering and serves as the director of the Center for Bio-products and Bio-energy for all WSU campuses. She makes her home in the residential area of the IPZ and does most of her research at the BSEL. This relationship combines the IPZ concept with the state’s STAR Researcher program to great advantage. The port is investigating



possible funding sources, including EDA federal funds for development of the new facility. The facility would help support and develop startup companies and emerging technologies.

Tenants Raise Funds for Advanced Research

PNNL received \$14.2 million for its role in two biofuels research consortia funded by the Department of Energy. The consortia will advance the science and technology needed to remove hurdles and accelerate the ability to convert plants and other biological material into biofuels for use in existing fuel distribution infrastructure.

Innovatek, a tenant of the IPZ, has a Department of Energy Phase Three Accelerant Grant for production of stand-alone electrical generation fuel cells. The fuel cells can use biofuels including non-food pyrolysis oils made from cellulosic waste sources. The three-year grant is for product improvement that may result in the installation of cells at a proposed Clean Energy Park in Richland and the IPZ. All of the new electrical generation devices installed at the park will connect to the grid to demonstrate the technologies and conduct long-term testing. The park will also

Section 1: IPZ Case Studies

TRI-CITIES RESEARCH DISTRICT Port of Benton



Credit PNNL

serve as an educational facility for students interested in alternative energy generation.

The Biomass Fuel Conversion project has received \$951,000 federal appropriations to the Port of Benton and partners WSU-Tri-Cities, and BSEL facility. The project focuses on using agricultural waste (cellulosic fuels such as chaff, stems, stalks, seeds, trimmings) as biomass feedstock. Using a multi-step biotech and thermo-chemical process, the feedstocks become bio-diesel, bio-jet, and other valuable chemicals. The biofuels have the same exact characteristics as similar petroleum-based fuels. The next step in research is to identify the most efficient methods to use in the process and determine ways to scale the process. The overall project may grow to \$1.5 million.

WSU-TC is planning a 45,000 sq. ft. wine science center to support the university's Viticulture and Enology Program. The center will host research, bachelors, and graduate programs. This \$24 million LEED project is planned for port land adjacent to the WSU-TC campus. The project is a partnership between the port, the City of Richland, and WSU-TC. Seventy percent of construction funds

are subject to a private sector fundraising effort being lead by the president and chief executive officer of Ste. Michelle Wine Estates. The city is developing a Public Development Area to design and construct the building; WSU-TC will lease the building with ownership of the facility transferring to WSU at the end of the lease.

Next Step: Nonprofit Status

The IPZ does not hold any assets. A 501(c)3 nonprofit formed in 2010 is awaiting final approval by the Internal Revenue Service. The nonprofit could own a building to use for technology transfer and commercialization efforts. An existing high-tech incubator in the zone could become a zone asset. Another option is to seek funds to support development of a port-owned development building. The Federal Economic Development Association has expressed an interest in assisting; the port would need support in offsetting the required 50 percent match.

Sources: Diahann Howard, Zone Administrator, Port of Benton; Gary Spanner, IPZ Chair, PNNL Lab; Dr. Keith Thompson, WSU-TC Assistant Director of the Center for Bio-products and Bio-energy; LoAnn Ayres, WSU-TC Director of Campus Outreach; Dr. Patricia, Irving Innovatek Inc.

Section 1: IPZ Case Studies

WALLA WALLA INNOVATION PARTNERSHIP ZONE City of Walla Walla

Founded:

2007

Zone Objective:

Water resource management and viticulture promotion

Partners:

- City of Walla Walla
- Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
- ETS Laboratories
- Port of Walla Walla
- Walla Walla County Commissioners
- Walla Walla Valley Wine Alliance
- Nelson Irrigation Corporation
- Walla Walla Watershed Alliance
- Walla Walla Watershed Management Partnership
- Walla Walla Community College (WWCC)

Summary of Activities:

In addition to the Port of Walla Walla Business Park at the airport, the Walla Walla IPZ contains two “centers of innovation” – both on the Walla Walla Community College (WWCC) campus: The William A. Grant Water and Environmental Center (Water Center) which provides office space, training facilities, and meeting space; and the WWCC Center for Enology and Viticulture (Wine Center) which contains laboratories, office space, and a teaching winery.

The IPZ has three physical locations: The Wine Center and Water Center – both located on the WWCC campus – and the Port of Walla Walla. The WWCC president is an IPZ leader, raising funds for the Wine Center and the Water Center, launching the Walla Walla Watershed Management Partnership, and working to integrate education into the facilities. The port hosts an industrial park, small business incubator, and winery incubator. A wine industry cluster study completed prior to the IPZ designation identified improved water infrastructure as a necessary condition for expanding the regional wine industry. The original capital

grant went into the preliminary architectural planning of the expansion of the Water Center and the construction of an addition to the Wine Center.

The Water Center facilitates innovative partnerships to address the environmental, economic, and cultural challenges on the Walla Walla Basin for long-term regional sustainability. In addition to building collaboration focused on emerging needs



Water Center, Walla Walla Community College Campus

and issues, the Water Center offers three professional technical degree programs in water resources: Watershed Ecology,

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WALLA WALLA INNOVATION PARTNERSHIP ZONE City of Walla Walla

Zone Administrator:

Tim McCarty, City of Walla Walla

Contact Information:

(509) 527-4540

Facilities:

Port of Walla Walla Business Park,
Walla Walla Community College
(Enology and Viticulture Center;
Water and Environmental Center)

Tenants:

- ETS Labs
- Confederated Tribes of the Umatilla Indian Reservation
- Walla Walla Watershed Alliance
- Walla Walla Watershed Management Partnership
- Sustainable Living Center
- Department of Ecology
- Port of Walla Walla Business Park: (74 Businesses; 3 Non-Profit Organizations; 5 Government Entities)

State Capital Funding:

\$725,000 in 2007
\$500,000 in 2009

Water Resources Technology, and Irrigation Technology. A water conservation endorsement is also available, as are short courses, seminars, and online classes in water resource management. The Water Center further serves area citizens by providing year-round community workshops and trainings to foster best management practices and implements a comprehensive kindergarten through twelfth grade environmental education program throughout the region.



Washington Governor Chris Gregoire assists WWCC Enology & Viticulture students with "crush."

The Water Center serves as a hub for partner organizations and houses the offices of the Walla Walla Watershed Alliance, the Walla

Walla Watershed Management Partnership, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), Washington State Department of Ecology, and the Sustainable Living Center. The Water Center is operating at full capacity and is expanding to add another 16,000 square feet, which will more than double the space for water research labs, professional and technical research staff, and an education and training program in watershed ecology. Capital grants allowed the college to engage an architect for the expansion, which led to additional grants from the port, county, private community, and the federal government, for a total of \$7 million.

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) will move eight to 12 of their 125-person (\$2.5 million payroll) Department of Natural Resources to the Water Center once the expansion is complete (anticipated Spring 2011). The CTUIR is receiving \$116 million over 10 years, which funds 24 projects from Bonneville Power Administration to research fish (salmon and lamprey eels) and habitat rehabilitation, as well as water restoration. This includes water rights, water table restoration, hatchery, stream restoration, and research. Students

Section 1: IPZ Case Studies

WALLA WALLA INNOVATION PARTNERSHIP ZONE City of Walla Walla



volunteer with this group and the associate degree program in watershed ecology has both tribal and non-tribal contingency. Upon completion of the degree program, a student is qualified for employment in various natural resources and other public/private technician positions.

The Walla Walla Watershed Alliance and Walla Walla Watershed Management Partnership are both located at the Water Center. Both report excellent synergy in being co-located with other interested organizations, and having access to students and faculty. The former director of the alliance, and now director of the partnership, sees huge potential in the IPZ for collaboration and innovation: “The Walla Walla area has many pockets of innovation in environmental stewardship, water management, and agriculture. The IPZ is drawing them together and integrating manufacturing, agriculture, education, and transportation to remain competitive.” The Watershed Management Partnership is planning to develop an assessment tool for water management projects created by the IPZ.

The Sustainable Living Center (SLC) is a new

nonprofit educational tenant of the Water Center. The SLC is engaged in two major projects. The first is a Dept. of Commerce grant-funded weatherization program that provides assessments and energy educational workshops and training to the community. The second project provides building supplies comprised of recycled materials that otherwise would go to the landfill. Leasing space in the Water Center allows the SLC to collaborate with the other organizations on future topics. They also find that operating out of a LEED-certified building helps to communicate their mission to clients and the public.



Nelson Irrigation Corporation is a private-sector partner. Nelson engineers irrigation equipment and systems internationally and

Section 1: IPZ Case Studies

WALLA WALLA INNOVATION PARTNERSHIP ZONE City of Walla Walla



has developed groundbreaking products for water efficiency utilization. Nelson works with farmers and scientists around the world to improve water quality, soil structure, and plant health to promote sustainable agriculture and water efficiency. Nelson works with WWCC on various collaborative projects, including pilot product testing and internships.

Training a Focus of Wine Center

The Wine Center houses WWCC's Enology & Viticulture Program. It includes a two-year, full-time course of study, designed for students pursuing careers in the wine industry. WWCC created College Cellars, the first community college teaching winery, with its own label, to provide real-world experience for students. Students in the program come from throughout the United States and represent a wide cross-section of the population – all seeking an education leading to a career in the burgeoning wine industry.

The wine industry in Walla Walla started with its first bonded winery in 1977 – over 30 years ago – and now boasts over 100 wineries. As an industry, wine accounted for 8.5 percent of all jobs in the Walla Walla Valley in 2007 and is projected to account for 15.8 percent in 2017.

(Source: 2007 EMSI Wine Cluster Study)

The Wine Center houses ETS Laboratories, a leading provider of microbiology service and applied research in support of the wine industry. ETS provides laboratory analysis to growers and vintners throughout the world. With labs in California and Oregon, ETS's growth into Walla Walla has helped local vintners get quick lab results, access to solutions for global wine industry issues, and collaborative research opportunities for the Wine Center and the local industry. An original IPZ grant helped expand the initial ETS Walla



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WALLA WALLA INNOVATION PARTNERSHIP ZONE City of Walla Walla



Walla lab to accommodate increased space requirements.

Walla Walla Community College is in the process of forming a new \$1 million wind-energy education program on campus led by the former manager of a major wind energy firm and aided by an electrical engineer. The WWCC campus is in a good position to provide this education as it is located within 150 miles of over 4,000 wind turbines that are beyond the permitting stage of construction. The college president hopes to assist this industry by training students for the many new jobs required to construct and maintain wind turbines. The community college is also working toward the goal of establishing a Center for Entrepreneurship that focuses on the emerging wine, food, and art economy.

The Port of Walla Walla IPZ facility is a 1,500-acre industrial park with 500,000 square feet of industrial space located at the airport. The port is using capital grant money to supply the entire park with high-speed fiber optic internet cabling. The industrial park is home to wineries, coffee roasters, a fiberglass manufacturer, a stove manufacturer, and agriculture-related businesses with a national

presence. The fiber optic cabling will be a welcome tool for the small businesses in the park and for a five-building winery incubator operated by the port. The port will seek funds in the future for buildings to support funding and growth for small businesses.

Additional IPZ activities include:

- McKinstry and Infinia – Development of a grant application to build a renewable energy park.
- Pacific Power – Development of grant application to build a renewable energy park; award of two Blue Sky Program grants to WWCC totaling \$133,200.
- Walla Walla Public Schools – Issued a lease intent agreement with the community college for the proposed establishment of a branch campus of the Tri-Tech Skills Center on five acres within the IPZ.
- WWCC, in collaboration with the Confederated Tribes of the Umatilla Indian Reservation – Implementation of a new Watershed Ecology two-year degree program.
- Walla Walla Watershed Management Partnership -- Implementation of a newly authorized program to manage water at the local and basin level.

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WALLA WALLA INNOVATION PARTNERSHIP ZONE City of Walla Walla



- WWCC, with the support of the Confederated Tribes of the Umatilla Indian Reservation – Development of a grant application to the U.S. Department of Commerce Economic Development Administration for \$3 million to construct a 16,000 sq. ft. expansion of the William A. Grant Water & Environmental Center at the community college for laboratories and office space and for use by fisheries and aquatic research staff for watershed restoration.
- Nelson Irrigation – Conferences, workshops, trainings, and events for the national and international client and dealer network. Brought participants to Walla Walla to learn about innovations and products for improving irrigation to enhance agricultural economics and promote sustainable water practices, including representatives from Australia, New Zealand, Africa, and Europe.
- Confederated Tribes of the Umatilla Indian Reservation / U.S. Army Corps of Engineers – Watershed system-flow feasibility study.

Zone-Hosted Conferences:

- Leadership Walla Walla Training / Port of Walla Walla
- International Wine Export Event / Washington State Wine Experience
- Geomorphic Assessment / Walla Walla Conservation District
- Wine Bloggers Conference
- State Director of Agriculture Forum / Department of Agriculture
- Walla Walla Valley Wine Alliance Semi-Annual Meetings
- Pre-Harvest Workshop / ETS Labs
- International Sales Conference / Nelson Irrigation
- Broadband Workshop / Department of Commerce, Port of Walla Walla

Sources: Tim McCarty, Zone Administrator, City of Walla Walla; Paul Gerola, Port of Walla Walla; Cathy Schaeffer, Walla Walla Watershed Alliance and Walla Walla Watershed Management Partnership, Sustainable Living Center; Steven VanAusdle, Walla Walla Community College; Brian Mahoney, Confederated Tribes of the Umatilla Indian Reservation

Section 1: IPZ Case Studies

WASHINGTON STATE BIOMEDICAL DEVICE INNOVATION ZONE City of Bothell

Founded:

2007

Zone Objective:

Grow and expand the biomedical device cluster in the region

Primary Founding Partners:

- City of Bothell
- Economic Development Council of Snohomish County
- enterpriseSeattle
- University of Washington Bothell
- Washington Biotechnology & Biomedical Association (WBBA)

Summary of Activities:

The partners in the Biomedical Device Innovation Zone (Bothell IPZ) are focused on promoting the development of the biomedical device cluster through programs centered on improving industry branding, funding, networking, education / development and secondary industry support. Because of these activities, the Bothell IPZ is the recognized focal point for the medical device industry in the region. There are over 2,800 biomedical device jobs in the Bothell IPZ, representing 48 percent of the total biomedical device jobs in the region. The biomedical device cluster ranks fifth largest in the United States. The IPZ, formed around the existing cluster of biomedical device operations, has provided companies a solid framework within which to network.

In November 2009, the partners proposed creating the Washington MedTech Discovery Center with an incubator as its center post

to promote commercialization, partnerships, and growth of the biomedical device cluster. The project partners have identified vacant space at the Northshore School District and are seeking to use grant funds to make tenant improvements to the space and to purchase equipment for the incubator's machine shop.



The decision-making process can be time consuming because the IPZ is working collaboratively with a number of organizations, including the University of Washington Center for Commercialization, private partners, and others.

The biomedical device cluster is a subset of the overall life sciences industry, and the Bothell IPZ has provided an opportunity to spotlight the sector. The IPZ is a focal point for the cluster, bringing academia, industry, and government together to coordinate efforts around the promotion of

Section 1: IPZ Case Studies

WASHINGTON STATE BIOMEDICAL DEVICE INNOVATION ZONE City of Bothell

Collaborative Supporting Partners:

- Cascadia Community College
- Edmonds Community College
- Lake Washington Technical College
- Workforce Development Council of Seattle - King County
- Workforce Development Council of Snohomish County
- Washington Research Foundation
- Puget Sound Regional Council – Prosperity Partnership
- Washington Technology Industry Association
- Philips Medical Systems
- Medicus Technologies Corporation
- Pathway Medical Technologies
- Spiration
- Carbon Design Group
- EKOS Corporation

the biomedical device industry. The zone has fostered collaboration and spawned new ties between industry and academia, facilitating tech transfer, and promoting and supporting the creation of industry companies and jobs. Since the launch of the Bothell IPZ the cluster has benefited from the creation of the Washington Medical Technology Angel Network, called WINGS. Also helpful has been the development of a number of new educational programs, including the University of Washington Bothell's Bachelor of Science offerings in Electrical Engineering and Biology. Zone programs and events create many connections and serves as a network for sharing information.

The Bothell IPZ hosted or sponsored the following conferences, studies, and surveys:

- Washington State Biomedical Device Industry Study to assess the economic impact of the industry.
- Regional Machine Shop Survey identified organizations in the region that had done, or planned to do, prototype development work for the industry.
- Annual Industry Outlook Survey benchmarked regional trends including sales and hiring. 85 percent of the respondents projected their sales to increase or remain the same in 2010.
- Washington State Biomedical Device Summits. Over 200 attendees (85 percent from the medical device industry) participated in the third annual summit held June 2010.
- JumpStart C-Level Roundtables for industry executives from startup and established companies in the IPZ (Twice/year).
- Co-hosted a seminar on “Staying Competitive in the Global Market” that included networking with Washington State trade representatives from Europe and Asia.
- Co-hosted the Prosperity Partnership Medical Device Cluster Tour, including company visits and demos at Philips Medical Systems and EKOS Corporation.

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WASHINGTON STATE BIOMEDICAL DEVICE INNOVATION ZONE City of Bothell

Zone Administrator:

Terrie Battuello, Assistant City Manager, City of Bothell

Contact Information:

Terrie Battuello (425) 489-3387

Tenants:

The Bothell IPZ does not own, lease land, nor have tenants

Facilities:

The Bothell Biomedical Device Innovation Zone is located within the City of Bothell. The zone includes Bothell's four privately owned science parks, the University of Washington Bothell, and Cascadia Community College. Private biomedical companies located within the zone include Philips Medical Systems, SonoSite Inc, Medicis Technologies, and EKOS Corporation.

State Capital Funding:

\$500,000 in 2009

New Businesses Spring from Medical Firm

Philips Medical Systems US headquarters is located in the IPZ. Philips is one of the largest providers of ultrasound, diagnostic and cardiac defibrillation devices in the world. Their ultrasound manufacturing facility is also located in the zone using technology developed and commercialized from the University of Washington. Former executives from Philips, and its local predecessor ATL Ultrasound, have spun out and founded companies in the Bothell IPZ including SonoSite, EKOS, and Medicis Technologies.

SonoSite uses ultrasound in their hand-held and mountable devices, and Medicis uses ultrasound in non-invasive body sculpting devices.

EKOS is pioneering work in the use of ultrasound for therapeutic purposes such as relieving blood clots and targeted use of blood thinners activated by ultrasound application.

In 2010, the IPZ identified over 70 patents related to the medical device sector and tied to Bothell IPZ participants.



2010 Washington State Biomedical Device Summit presenters: Tom Clement, Pathway Medical Technologies/ UW C4C; Chris Rivera, WBBA; Steve Halasey, InHealth; Gerald McMorrow, Verathon; Matt Smith, EDC of Snohomish County; Mayor Mark Lamb, City of Bothell; Chancellor Kenyon Chan, University of Washington Bothell; Lee Huntsman, Life Sciences Discovery Fund; and William Christopher, Cascadia Community College

Section 1: IPZ Case Studies

WASHINGTON STATE BIOMEDICAL DEVICE INNOVATION ZONE City of Bothell



Space Shortage Lead to New Plans

As a part of the Washington MedTech Discovery Center, the Bothell IPZ is partnering to establish an incubator for the commercialization of biomedical device technologies. The concept, under development by the UW Center for Commercialization, will provide space and support for up to six startups for a period of 12-24 months on a fee-for-service basis. Candidate firms will contribute by paying for the services provided by the incubator.

The initial approach was to locate in space provided by the University of Washington Bothell. Increased enrollments on campus and financial restrictions brought about by budget reductions have made this approach unworkable. The project partners are now looking for off-campus space with the Northshore School District in one of the area business parks. IPZ grant restrictions require the incubators to be located in public facilities. This requirement, in conjunction with the unique space needs for the project — a combination of office and high-bay warehouse, the latter for installation of a machine shop — has made it challenging to identify and secure a space for the project.

The Biomedical Device Innovation Zone is in the process of forming a nonprofit to operate the zone. This will allow creation of a board, with a charter, by-laws, articles of incorporation, and a specific decision-making process. The nonprofit will also streamline the fundraising process. Funds are currently raised on project-by-project basis.



Annual Washington State Biomedical Device Summit

Sources: Terrie Battuello, City of Bothell; Margo Shiroyama, enterpriseSeattle; Matt Smith, Economic Development Council of Snohomish County

Section 1: IPZ Case Studies

WATERFRONT INNOVATION ZONE Port of Bellingham

Founded:

2007

Zone Objective:

Marine, related transportation and technology transfer

Partners:

- Port of Bellingham
- Western Washington University
- Bellingham Technical College
- Technology Alliance Group
- All American Marine
- Kitsap Transit
- Heath-Tecna
- Storkcraft
- Janicki Industries
- Transition Composites
- New Market Design Lab

Summary of Activities:

Bellingham's Waterfront Innovation Zone (WIZ) is a brownfield being redeveloped. It is located adjacent to downtown Bellingham. The port owns a 250,000 sq. ft. warehouse that contains the Technology Development Center (TDC) in one portion. The port acquired the building and most of the land within the IPZ from Georgia Pacific when the company ceased its waterfront operation. The space not occupied by the TDC, but is leased by Storkcraft, which employs 26 people who warehouse and distribute baby furniture products.

The first capital project within the WIZ is the 10,000 sq. ft. TDC leased by Western Washington University (WWU) and Bellingham Technical College (BTC). The TDC offers collaborative research between higher education and industry. A total of \$1.7 million in funding was used to develop the TDC. This consisted of a \$1 million IPZ capital grant, with the balance from the port, and federal funding.

The Technology Alliance Group (TAG) office is located in the TDC. TAG is a high-tech

industry trade association affiliated with the Washington Technology Industry Association. TAG's mission is to promote, educate, and advocate for Northwest Washington technology businesses. TAG acts as a connector between industry and academia, conducting a census of available R&D-oriented faculty and matching them with industry needs. In the summer of 2010 TAG hosted three listening-session tours of the facility involving over 40 companies working to link needs with research capacity. TAG is working with WWU to enhance university-business relationships to generate projects in the TDC and to increase overall awareness about the center in the community.



Port of Bellingham Technology Development Center (TDC)

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WATERFRONT INNOVATION ZONE Port of Bellingham

Zone Administrator:

Dodd Snodgrass, Port of Bellingham

Contact Information:

(360) 676-2500

Facilities:

Port of Bellingham Technology Development Center (TDC): 190-acre uplands, 30-acre wastewater treatment lagoon (future marina), and a deepwater shipping terminal

Tenants:

- Western Washington University
- Bellingham Technical College
- Technology Alliance Group of Northwest Washington
- Storkcraft Manufacturing

State Capital Funding:

\$1,000,000 in 2007

The Technology Development Center has been operating for one year and houses classes, training sessions, and special events. Bellingham Technical College holds electro-mechanical workforce training in the TDC and is working to develop curriculum in renewable energy applications for the trades. WWU is using the space for the collaborative projects described below.

An IPZ long-term plan includes job creation and private investment in the Marine Trades

area of the Waterfront Innovation Zone. Storkcraft, the world's largest manufacturer and distributor of baby furniture, has a five-year interim lease in the warehouse. This lease provides necessary cash flow for the Port's redevelopment effort.

The original goal was that, after 2014, the warehouse space occupied by Storkcraft would be available for redevelopment. Due to the real estate slump and recession, the timing to implement redevelopment within



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WATERFRONT INNOVATION ZONE Port of Bellingham



the IPZ will take longer than originally planned. A comprehensive master plan is currently before the city of Bellingham for consideration by early 2011.

Western Washington University is interested in expanding its research and development program into broader green public transportation areas such as biofuels and hybrid buses. One of the main advantages to the university is the TDC location off campus. The central location and parking makes it convenient for meetings with business and community leaders. The TDC provides space for the machine tools used in composite fabrication and machining.

Co-location Fosters Synergies

The IPZ fosters relationships between the university community and private businesses, providing a forum and large access space for meetings and technology demonstrations. The combination of the technical college, the university, and TAG in one location will provide a “critical mass” of students and instructors in a variety of related disciplines not featured together at either school. This synergy is attractive to business, academia, students, and new projects.

The port contracted with Technology Alliance Group (TAG) in 2010 to assess strategic opportunities for technology transfer commercialization, applied research, and other university-industry collaborations. Assisted by Pacific Northwest National Laboratories, TAG completed an in-depth search for intellectual property capacity of industry clusters in Whatcom County. The results showed that inventors in the county hold 697 utility patents. Of these, local industry controls 283 utility patents. TAG also surveyed 450 technology companies, assessing existing R&D activities and identifying needs for access to specialized equipment, research, and development expertise, and student talent. The electronic survey showed that 28 percent of the respondents would be interested in working with a university or college on an R&D project.

The university has a major project in the center to design a prototype para-transit bus for a consortium of transit agencies led by Kitsap Transit. Para-transit buses haul single passengers or small groups of passengers with special needs such as wheel chair access. The TDC team is rebuilding a bus using composites (carbon fiber and thermo-molded plastic) to

Section 1: IPZ Case Studies

WATERFRONT INNOVATION ZONE Port of Bellingham



Vehicle Research Institute Hybrid Bus Project

create a lighter vehicle; they are also replacing the drive train with a hybrid electric system that will use either natural gas or diesel with electricity. These technologies should lead to more energy-efficient vehicles. The university has purchased over \$50,000 in new equipment for this project.

The team is also redesigning the bus platform with wheelchair access as the primary function rather than the traditional adaptation of standard buses to accept wheel chairs. This should lead to less time spent idling during load and unload, which is convenient for passengers and a fuel saver for the transit agency.

A manufacturer search process will commence once Kitsap Transit tests the completed prototype. Within the TDC, WWU is working with two private partners on the project, Janicki Industries and Transition Composites. The Federal Transit Administration awarded Western a \$730,000 grant for this project in September of 2010.

Western Grad Develops Robotic Camera

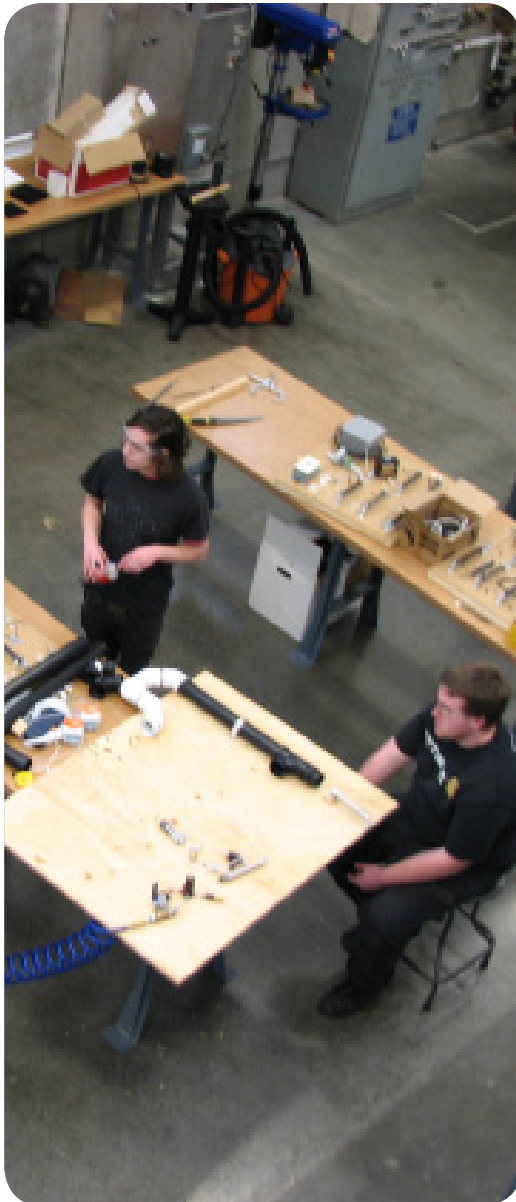
New Market Design Lab, a small company owned by a recent Western graduate, is

developing a telemetrically operated robotic camera for use in the pharmacy industry. The goal is to allow a single pharmacist to direct technicians manufacturing compounded medicines in pharmacy clean rooms at several remote locations. This will allow one pharmacist to serve several small hospitals, saving time and transportation costs. New Market Design Lab moved its research and development facilities into the TDC in August of 2010. The CEO, working with student interns, is developing a prototype for Envision Telepharmacy Inc. in the TDC.

Western Professor Nicole Larson recently completed research for All-American Marine, Inc. (AAM) and its partners to develop a hydrofoil fabricated from advanced composite materials. The hydrofoil is for a 77-foot high-speed, low-wake, passenger ferry for use on environmentally sensitive ferry routes in Puget Sound. The foil allows increased speed with a smaller wave pattern. The research consisted of initial selection and testing of composite materials, hydrofoil design and analysis, and fabrication of one-quarter scale and full scale hydrofoil prototypes using carbon fiber composite materials. The hydrofoil components were stress tested and used to

Section 1: IPZ Case Studies

WATERFRONT INNOVATION ZONE Port of Bellingham



BTC Electro-Mechanical Program

guide the design and fabrication of the final hydrofoil, by private sector partner, James Betts Enterprises, Inc., under a subcontract with AAM.

Western Professor Todd Morton is working with AAM and its partners to install an integrated electronic sensor system on the hydrofoil to enable real-time data acquisition and analysis of the hydrofoil and vessel performance during testing planned for the Seattle-Bremerton passenger ferry route. Bellingham Technical College is a partner in the TDC housing their Electro-Mechanical Technology (EMTECH) program there. EMTECH trains people for industrial manufacturing and maintenance careers working with hydraulics, pneumatics, electrical, and machining. The original focus for BTC was marine oriented but is evolving to include all types of renewable energy applications. The program has a new initiative to “green” the existing curriculum and create a renewable energy lab. In the future, students could have hands-on experience with wind, solar, biofuels, and anaerobic digestion.

BTC sees the TDC as a resource for multiple industries and an opportunity to nurture the

nascent renewable industry in Bellingham. The TDC has a lot of space for additional projects, the wind is more reliable near the water, and the warehouse roof could host solar experiments and demonstration projects.

BTC has a successful partnership conducting pre-employment training for Heath-Tecna, a local aerospace company that builds aircraft interiors. They have conducted eight cycles of two-week training in the TDC. BTC works with the Northwest Workforce Development Council and Impact Washington to design and fill the classes. To date, 105 trainees were hired by Heath Techna. The college sees this as a successful model and plans to pursue other industrial partners for similar incumbent worker training and pre-employment training.

Sources: Dodd Snodgrass, Zone Administrator Port of Bellingham; Mark Bussell, Professor WWU; Rob Costello, Dean BTC; Anna Ehnmark, Executive Director TAG

Section 2: Recommendations from the Washington Economic Development Commission

November 1, 2010

Mr. Rogers Weed, Director
Washington Department of Commerce
1011 Plum Street SE
Olympia, WA 98504-2525

On behalf of the Washington Economic Development Commission (WEDC) I am pleased to transmit our comments on the report: ***Innovation Partnership Zones: First Steps toward a More Collaborative Approach to Economic Development***. Innovation Partnership Zones (IPZs) represent a new kind of economic development model and a key focus for economic recovery. These nascent innovation hotspots offer a more decentralized, organic and collaborative model for developing human capital, growing new companies, expanding exports and creating jobs. The array of IPZs described in the report, each unique in purpose and structure, is a fascinating assortment of natural experiments that can be collectively examined for performance outcomes and policy insights. What follows are several points we find salient to the IPZ program as it moves forward. Some of these points are discussed in detail in a recent Brookings Institute policy paper by Mark Muro and Bruce Katz: [The New "Cluster Moment": How Regional Innovation Clusters Can Foster the Next Economy, Metropolitan Policy Program](#).

IPZs reflect real innovation activity. IPZs are not top-down creations; rather we see them better described as emergent, self-organizing innovation clusters driven bottom-up. Experience indicates that efforts to invent a cluster top-down, where one does not exist, is unlikely to succeed due to distortions in the selection process, dearth of leadership, and overreliance on government initiative rather than market dynamics. The success pathway of a growing innovation cluster is a dynamic and engaged private sector willing to take on risk in the context of a pro-innovation policy environment. Without the strong backing and support of the private sector, an IPZ is less likely to realize its economic potential.

Governance of innovation clusters is an emerging practice. Innovation does not fall neatly into one category, one discipline, one geography, one sector or one program. As a consequence a successful IPZ requires a unique kind of regional governance—an innovation ecosystem that can inspire collaboration and harness several kinds of assets and capabilities. The report provides evidence that IPZs have the leadership potential to generate significant regional benefits including job creation, skilled workers, firm growth, exports and higher value-add economic activity.

Operational funding for IPZs. Funding for IPZs is currently in the form of capital funds (\$6.5 million to date). While capital projects are helpful, they do not ensure the future operational capacity of IPZs. Operational funding is hard to garner given IPZs are early-stage, high-risk organizations

Section 2: Recommendations from the Washington Economic Development Commission

and that the state faces severe fiscal constraints. Nevertheless, such funding can go a long way in building leadership, essential staff and the relationships necessary for trusting and reciprocal collaboration.

Coordination of fragmented programs. IPZs provide a framework for coordinating the disparate programs of the Federal and state government. Programs in the areas of talent development, R&D, investment, entrepreneurship, exports and infrastructure can all be viewed as cluster “enhancing.” The IPZs can be used to organize disconnected initiatives along the Federal, state, local vertical axis as well as horizontally. Funding leverage and flexibility is a key element to zone success. More federal funding is becoming available around the regional innovation cluster concept. Commerce Department should investigate which federal economic development programs have the greatest potential to align with IPZ strategies. See WEDC report on this subject: Regional Innovation Clusters: A Strategy to Compete for Federal Funds.

Strengthening the IPZ network and research collaboration. The innovation challenges we face vastly exceed the capabilities of any existing IPZ. In the hyper-competitive, super-fast world of innovation we should be connecting IPZ nodes to complementary knowledge creation and commercialization nodes outside the zones. The real added value of an IPZ will come from actively managing a broader set of relationships that integrate capabilities that exist elsewhere. For example, IPZs should link their strategies with the research and commercialization capabilities of the University of Washington, Washington State Universities, the Pacific Northwest National Laboratory and business R&D centers. Building a stronger ecosystem of collaborating IPZs could be facilitated by the Commerce Department through web based information sharing, recognition of successful inter-regional collaborations, placing Entrepreneurs-in-Residence within IPZs, convening university-industry-IPZ forums around grand innovation challenges and innovation “X” prize competitions.

Robust financing approaches and tools. As IPZs gain experience and confidence in their growth strategies the issue of how to finance that growth will become more critical. We recommend that the Commerce Department:

- Test the feasibility of self financing innovation clusters, similar to WA agriculture commissions.
- Expand IPZ access to capital by supporting local financing tools such as TIF (tax increment financing).
- Encourage state agencies to provide more flexibility for IPZs in grant and contract programs.

Branding Washington’s innovation economy. The network of IPZs presents a global branding opportunity. The WEDC has called for a “Decade of Innovation.” The goal is to make Washington the most creative, fertile and attractive investment environment for innovation in the world. We should not overpromise. However, some IPZs are first class exhibits of Washington’s vibrant innovation economy. The WEDC enthusiastically embraces IPZs as champions of a new economic development model that the world will come to know and appreciate.

Section 2: Recommendations from the Washington Economic Development Commission

Performance measurement. The WEDC has offered its metrics framework in its Performance Measures Report (June 30, 2009). The metrics are designed to focus on outcomes in the region as a whole. We caution that detailed reporting requirements for input or process activity can have the effect of limiting creative options for an IPZ. IPZs should be functioning as on-going policy experiments and trying out various methodologies for globally networked innovation. The metrics adopted should focus on overall regional outcomes, be relevant to the IPZs governance structure and have broad utility to stakeholders in the region.

In summary, although IPZs are modestly funded, they are a catalyst for regional innovation and a platform for connecting the region to the world. IPZs are not a single program, rather a framework for each region to set an ambitious technological direction, build enduring relationships, better coordinate economic development programs and create future high value jobs. They represent a new collaborative approach for innovation aligned with the long term economic growth strategy of the WEDC. We are confident, in time, as the IPZ network learns, it will emerge as a robust innovation accelerator and job creator.

Respectfully,



Egils Milbergs
Executive Director

cc: Ms. Patti Brooke
Ms. Mary Trimarco
Ms. Heidi Hughes
Mr. Bruce Kendall
Mr. Stephen VanAusdle

Section 3: Appendix

SHORTCOMINGS OF AVAILABLE DATA FOR USE IN EVALUATING ECONOMIC IPZ IMPACTS



Because the IPZs are small in relation to the overall economy, it is difficult to benchmark their effects through independent data. In order to effectively measure and assess IPZ-related outcomes, data defined by the geographic scope or business area of the IPZ must be available. Unfortunately, as explained below, no such publicly available data exists. One solution would be to work with the state Employment Security Department and Department of Revenue to use firm-level data on companies/entities residing within a given IPZ. However, because the population of firms within an IPZ is small, publication of data and findings is impermissible because it could compromise company disclosure and confidentiality agreements. A second option would be to conduct surveys designed to solicit information from resident companies/entities within an IPZ. This would require cooperation of the private firms in disclosing business information and require frequent periodic surveys (e.g. every six months) in order to provide meaningful information. There would probably need to be an incentive for the resident companies/entities to participate on a regular basis.

Data — Sources and Limitations

The following data is publicly available at various levels of disaggregation: 1) labor force data, 2) revenue data, and 3) export data. There is no publicly available data (e.g., accessible online through a federal and/or state-level agency) that disaggregates data at the firm level, although there are some possible means to obtain this data contingent upon signing of data-sharing agreements with data-collecting and managing agencies.

Quarterly Census of Employment and Wages (QCEW)

Quarterly Census of Employment and Wages (QCEW) data are the most accurate labor and firm data available, based on unemployment insurance data reported by employers on a quarterly basis. However, data release has a significant lag period (the most recently available data is for the first quarter 2010, which is now over six months old). Disaggregation of QCEW data is possible by the following groupings: 1) total number of firms, employees, and wages paid out by six-digit North American Industry Classification System (NAICS) codes; 2) number of firms by one-to-three digit NAICS codes and by size; and 3) firms by county and size. ESD does not

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publish data below the county level due to company disclosure and confidentiality issues. QCEW data also reports wages paid out by industry and county.

The Dept. of Commerce currently maintains a data-sharing agreement with ESD, allowing privileged individuals access to firm-level data, including firm-level employment and wages paid out by quarter, primary NAICS classification, street-level address, and unemployment insurance (UI) number. So long as published findings aggregate upwards such that no firm-level data is discernable, a finer level of sub-county analysis is possible. This would require approval from ESD, however, with an appropriate data-sharing agreement.

Current Employment Statistics (CES)

The other existing source for labor force data is the Current Employment Statistics (CES) program. Each month ESD reports survey data on jobs, wages, and unemployment to the U.S. Bureau of Labor Statistics, which then uses this data to produce and publish national, state, and regional (metropolitan statistical areas, metropolitan divisions, and labor market areas) metrics. While this data provides an accurate picture of statewide

employment and wage trends, limited sample sizes at the county level preclude effective use of this data at the sub-state level.

Occupational Employment Statistics (OES)

The OES database enables researchers to compare employment and earnings data across states and metropolitan statistical areas (MSAs) by occupation. Data reporting occurs each spring, based on surveys of employers in May of that year, and includes data on annual, 10th, 25th, 75th, and 90th percentile wages and the employment, and standard errors. The OES survey covers all full-time and part-time wage and salary workers in nonfarm industries. Surveys collect data for the payroll period including the 12th day of May or November. The survey does not cover the self-employed, owners and partners in unincorporated firms, household workers, or unpaid family workers. There is also some sizable discrepancy between OES occupational employment data and CES non-farm employment data. For instance, total non-farm employment in Washington State under the CES was reported to be 2,837,000 in May 2009, compared with 2,789,670 — a difference of 47,330 jobs. In addition, OES data at the state and MSA

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levels cannot disaggregate by occupations per industries at any lower level. The Employment Security Department provides cross industry-occupation matrix estimates on annual basis, but this breakdown goes down only to the macro, sub-state level (e.g. Northwest, Olympia Consortium); no such data exists at the city and/or IPZ level.

Business Revenue data

The Washington State Department of Revenue (DOR) provides online, public data on business revenues. The Quarterly Business Review data includes annual and quarterly data on statewide gross business income by NAICS and taxable retail sales by county and city, broken down by one-to-four digit NAICS code (depending on risk of confidentiality infringement). The most recently available data lags one quarter.

Export data

The State groups export data by product type (harmonized system code or HS) — there is no information available at the firm level. It is also important to note that state-level export data is only for merchandise and commodities — there is no reliable data source for services exports, which is likely the primary deliverable

for many technology firms resident in IPZs.

Challenges in benchmarking IPZs with existing data

In order to effectively measure and assess IPZ-related outcomes, data delimited by the geographic scope/area of the IPZ must be available. Unfortunately, as explained above, no such publicly available data exists. One solution would be to sign data-sharing agreements with ESD and DOR to obtain and analyze firm-level data on companies/entities resident within a given IPZ. However, if the population of firms within an IPZ is too small, any publication of data and findings may compromise company disclosure and confidentiality agreements. This disclosure would make the data use impermissible. A second option would be to construct a survey designed to solicit information from resident companies/entities within an IPZ. In order for this to be an effective instrument for data collection, it would require frequent periodic surveys (e.g. every six months). This is also a requirement in order to provide a meaningful incentive for the resident companies/entities to participate on a regular basis.

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INNOVATION PARTNERHIP ZONES METRICS

Innovation Partnership Zone	Private Sector Investment	Jobs Created	Patents
1. Aerospace Convergence Zone (Workforce Development Council Snohomish County)	\$55,800,000	None (1,000 jobs retained)	4
2. Central Washington Resource Energy Collaborative (Economic Development Group of Kittitas County)	\$0	1	0
3. Discovery Corridor Innovation Zone; Steinmueller Innovation Park (Columbia River Economic Development Council)	\$0	0	0
4. Grays Harbor Sustainable Industries Innovation Partnership Zone (Port of Grays Harbor)	\$20,000,000	5	0
5. North Olympic Peninsula Innovation Partnership Zone (Clallam Economic Development Council)	\$0	0	Number of licenses or patents secured: 5 Number of licenses or patents pending: 10
6. Pullman Innovation Partnership Zone (Port of Whitman)	\$1,012,000	10	<u>1 secured; 1 pending:</u> ClaraSupplements licensed their nutritional supplements to ATP Beverages, and ecowell has 1 patent pending on the kiosk.
7. South Lake Union Global Health Innovation Partnership Zone (City of Seattle)	\$741,020,000	1,505	Number of licenses or patents secured: 91 Fred Hutchinson Cancer Research Center (5); Seattle Biomedical Research Institute (4); Institute for Systems Biology (4); University of Washington (78)

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INNOVATION PARTNERHIP ZONES METRICS

Innovation Partnership Zone	Private Sector Investment	Jobs Created	Patents
8. Spokane University District Innovation Partnership Zone (Greater Spokane Inc.)	\$13,728,655	270	None
9. Tri-Cities Research District (Port of Benton)	\$173,066,000	279	Number of licenses or patents secured: <u>Battelle</u> : 29 licenses; 54 US patents granted; 94 foreign patents granted <u>Areva</u> : 2 US patents granted
10. Walla Walla Valley Innovation Partnership Zone (City of Walla Walla)	\$564,000	0	0
11. Washington State Biomedical Device Innovation Partnership Zone (City of Bothell)	\$0	0	Number of licenses or patents secured: 72
12. Waterfront Innovation Zone (Port of Bellingham)	\$50,000	25	0



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