



# Department of Commerce

Innovation is in our nature.

## Innovation Partnership Zones 2012 Report: Toward a More Data-Driven Assessment

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Biennial Report per RCW 43.330.270

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Rogers Weed, Director

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# Executive Summary

## Overview

The Washington State Department of Commerce (Commerce) is legislatively mandated to produce a biennial report about Innovation Partnership Zones, or IPZs ([RCW 43.330.270](#)). This report provides information on funding, incentives, major activities, partnerships, performance measures, and outcomes achieved by IPZs since the last report in 2010.

For the 2012 IPZ report we developed a more rigorous quantitative and qualitative methodology that provides required information while better answering the following two questions:

- What are the set of value-added services and contributions an IPZ designation provides for regional economic development, and how might these contributions vary by region-specific attributes?
- To what extent does an IPZ designation meaningfully alter the behaviors of local economic development stakeholders (e.g., through greater collaboration), versus simply codifying existing activities?

Our approach has been to update baseline data analysis presented in 2010, analyze additional types of data provided by IPZs, and – for the first time – draw upon standardized sources of employment and patent data. Also for the first time, IPZ activities were looked at in relation to the maturity of their targeted industries and whether they serve an urban or rural area, which can have divergent needs. In addition, we interviewed IPZ administrators for qualitative information.

An IPZ is an economic development partnership among at least some of the following: educational institutions, research laboratories, public economic development organizations, local governments, chambers of commerce, private companies, and workforce training organizations. IPZs must be associated with a specific geographic area, and with one or more existing or emerging industry clusters of statewide importance.

In 2011, 11 of the 12 IPZs in the state were required to apply for redesignation to retain their IPZ status. Of these 11, one was denied. In addition, four new IPZs received designation to bring the current total to 15.

## Key Findings

Sufficient data were available to analyze employment trends for industry clusters associated with eight of the IPZs. The IPZs as a whole exhibited above-average

employment growth; the exceptions were Bellingham and Spokane, which trended closely with overall statewide employment.<sup>1</sup> While this data is insufficient for fully testing the relationship between employment growth and the intervention of a designated IPZ, this is a goal for future IPZ reports.

In 2008, 255 patents were awarded within industry clusters associated with an IPZ. This number rose to 342 in 2009 and to 447 in 2012, amounting to increases of 34 percent in 2009 and 31 percent in 2010 (over the previous year). The number of patents almost doubled over the two-year period.<sup>2</sup> It is not clear if the IPZ played a role in the development of these patents, but this data represents the only quantifiable measurement of innovation available given the resource constraints of this study.

An analysis of business plans and self-assessments found that geography – whether an urban or rural location – and industry maturity influenced each IPZ’s goals. In general, urban IPZs tended to focus on partnerships as a goal, branding as an IPZ outcome, and job creation or retention as the most important performance metric. Urban IPZs reported equally high engagement with both industry and education partners.

For rural areas, developing infrastructure and attracting investment were among the top goals and the most common outcome. Rural IPZs tended to report having a stronger engagement with industry than with education partners.

Relatively mature IPZs (based on the size and maturity of the industry cluster) were similar to urban IPZs in that partnering was the top goal and branding the most common added value. Mature IPZs more often chose jobs, startups, and partnerships as the key metrics to measure their success. IPZ maturity had no apparent impact on the level of partnership engagement.

Interviews suggest that IPZs function as more of a branding strategy than as a program. This highlights the strengths and weakness of IPZs. Being more of a strategy allows for greater adaptability to local conditions and needs. However, the structure of IPZs has also limited some of the potential tangible benefits that a more concrete program might offer.

We do not have sufficient quantitative evidence to demonstrate that IPZs directly alter the growth trajectories of their respective regions. However, qualitative evidence suggests that the IPZ designation does provide a conceptual framework for cooperation. Perhaps more importantly, it signals to external economic development funding sources (e.g., the federal government) the presence of an organizational structure potentially capable of leveraging additional investments. Moreover, the designation can serve as a marketing

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<sup>1</sup> Employment data was provided by the Washington State Employment Security Department (ESD). This data was constrained by confidentiality restrictions, particularly when looking at detailed industry or geographic data in lower-population areas.

<sup>2</sup> For federally collected patent data we used county-level extracts provided by technology class that are associated with the industry cluster(s) associated with an IPZ.

tool, particularly to foreign investors about the technological capabilities and assets of a region.

### **Program Improvement Suggestions**

Suggestions for improving the IPZ program were requested as part of interviews with each IPZ. The following is a summary of the more frequent or policy-significant comments by administrators and stakeholders.

- **Offer tax incentives** – Numerous respondents indicated that IPZs were at a disadvantage relative to other states in not being able to offer tax incentives to businesses to relocate within the zone.
- **Provide operating funds from the state** – All IPZs stated a desire for operational funding, but IPZs that are supported by large organizations tended to be less insistent about needing operational dollars.
- **Provide ways for IPZs to share ideas with each other** – An IPZ’s operational performance could be improved by networking and collaboration with other IPZs.
- **Reduce record keeping burden** – The state mandates the collection of performance data, which represents a significant workload for firms and IPZs.
- **Increase flexibility to expand IPZ geographic boundaries** – This is particularly pertinent for rural IPZs, which often lack high-density concentrations of industry.
- **Continue to appropriate capital funds** – Since the program’s inception, 16 capital grants have been awarded, totaling more than \$20 million.
- **Provide incentives to higher education** – Sweeteners, such as free or discounted laboratory space or assistance with commercialization, are needed to encourage greater academic participation with IPZs.

# Background

## Assessment Approach

Commerce is required to produce a biennial report about Innovation Partnership Zones. RCW 43.330.270 includes the following in Section 12: “The report must provide information for each zone on its: Objectives; funding, tax incentives, and other support obtained from public sector sources; major activities; partnerships; performance measures; and outcomes achieved since the inception of the zone or since the previous biennial report. The Washington state economic development commission must review the department’s draft report and make recommendations on ways to increase the effectiveness of individual zones and the program overall.”

In addition to providing the above-listed information, this study attempts to answer the following questions:

- What are the set of value-added services and contributions an IPZ designation provides for regional economic development, and how might these contributions vary by region-specific attributes.
- To what extent does an IPZ designation meaningfully alter the behaviors of local economic development stakeholders (e.g., through greater collaboration), versus simply codifying existing activities.

In order to answer these questions, this study goes beyond reporting performance data that IPZs are required by statute to submit in annual reports to Commerce. This data – which includes private investment information, job creation measures, and measures of innovation – can be problematic because of reporting errors, inconsistencies, and incompleteness.

Our goal was to take a first step toward developing a more rigorous program assessment methodology. This includes analyzing credible, standardized sources of data that allow meaningful, apples-to-apples comparisons (see “Quantitative Analysis” on page 11). Both the quantitative and qualitative data were analyzed by an urban/rural and an industry maturity framework. Industry maturity was determined at three levels: low, medium, and high maturity, based on the stature of firms within the zone. For example, the Snohomish IPZ is considered to be an urban IPZ of high maturity (see Page 16).

The methodology for this report was jointly developed and implemented by researchers from Commerce and the Washington State Economic Development Commission (WEDC). The cost was shared by both agencies.

## **IPZ Program History**

Egils Milbergs, Executive Director of the WEDC, says IPZs are “testing a geographically distributed economic development model that gives rise to innovation eco-systems.” This model is focused on accelerating bottom-up, organically driven collaborations to advance innovation and growth of industry clusters. The goal is to stimulate the growth of regional economies by building a collective strategy and relationships between industry clusters, sources of ideas, entrepreneurs, capital providers, education organizations, infrastructure and others, both externally and internally to the region. The intent is to turbocharge the development of new technologies, marketable products, company formation, investments, exports, 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.

Commerce initially designated 11 IPZs and distributed to them \$5 million in capital grants in 2007. Zone designation can occur in each odd calendar year. In 2009, Commerce designated a 12<sup>th</sup> IPZ and distributed an additional \$1.5 million in capital grants. Grants were competitive and not all IPZs received state capital grant funding. A new designation and redesignation process was conducted in 2011. As part of that process, four new IPZs were designated while one IPZ did not receive redesignation, leaving a total of 15 IPZs. In 2012, six of the IPZs received \$13,520,000 in direct appropriations from the Legislature.

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.
3. A strategic plan for regional cluster development.

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

## **Major Characteristics of IPZs**

The focus of each IPZ is as varied as the state’s geography and economy. Some regions focus on alternative energy generation or alternative fuel creation, while others emphasize worker training and sustainable manufacturing. High-density areas have biotechnology assets whereas agricultural areas work on water and sustainability. However, all are engaged in research and development. Most feature one or more institutions of higher education and focus on developing new research and development

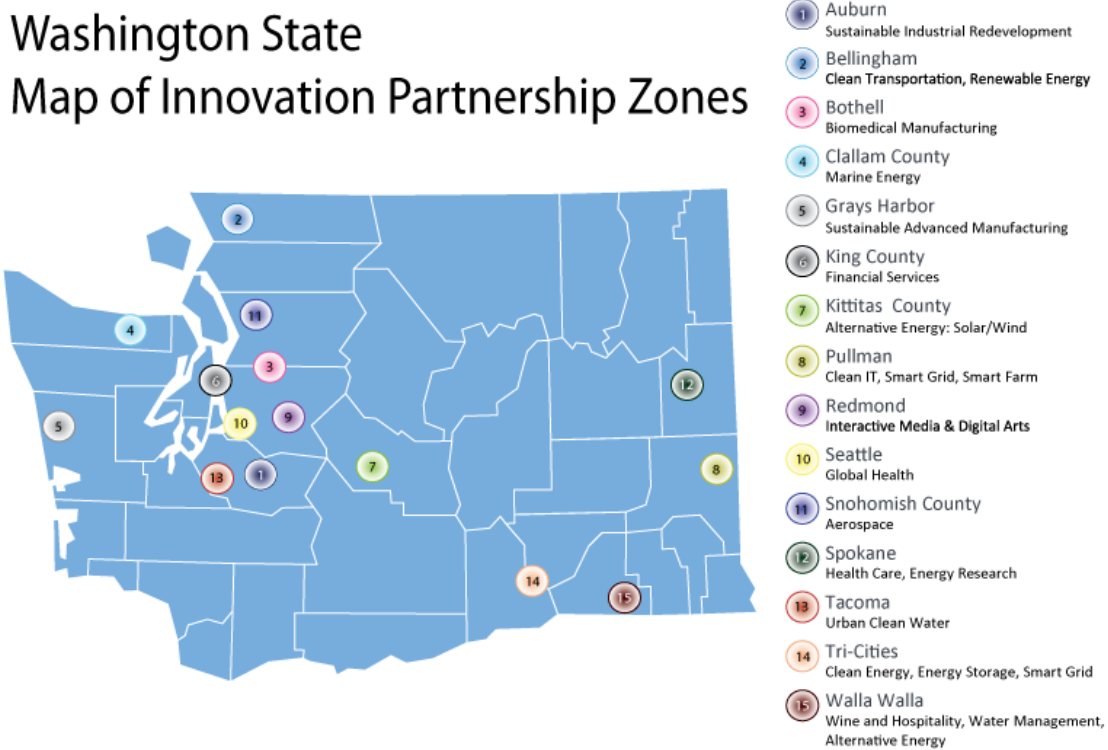


efforts, training or retraining workers, establishing new forms of education (new degrees, or new topic areas), and addressing the economy’s challenges.

Of the 11 initially designated IPZs, some received funding, but others did not. Progress for these original 11 has varied, but in most cases it has been slowed down by the Great Recession. Among the newly designated IPZs, boards and working plans are in place, and many have developed 501(c)3 nonprofit organizations and partners for fundraising purposes. In some cases, the IPZs took on economic development work that had previously been done by another entity.

One of the originally designated IPZs, Vancouver, did not retain IPZ status. An interview with this IPZ’s administrators can be found in the IPZ profile located in the Appendix. The 15 currently designated IPZs are shown in Figure 1.

**Figure 1: Washington State Innovation Partnership Zones**



## Quantitative Analysis

### Standardizing the Data

The research team for this report found much of the performance data submitted by IPZs to be inadequate for a rigorous state-level performance assessment. As discussed on page 4, this is due to reporting errors, inconsistencies, and incompleteness. We thus sought out alternative sources of credible, standardized data that allows apples-to-apples comparisons among IPZs.

Two major sources of data were drawn upon:

- Employment data from the Employment Security Department (ESD) was used to quantify how IPZs impact employment levels.
- Patent data from the U.S. Patent and Trademark Office was used as a proxy for measuring whether IPZs spur innovation.

As discussed below, these data sources currently possess limitations in their explanatory value. However, over time these sources could provide increasingly rich insights into the impact of IPZs on local economies.

### Employment Data

Change in employment levels is one of our primary outcome measures of interest. We analyzed census-level datasets from ESD that capture industry/activity and geographic features of each IPZ. See Appendix 2 for methodological details.

While this data will not provide sufficient information to quantitatively assess the net impact of an IPZ intervention on economic outcomes, it could function as a core measure to base future analysis on.<sup>3</sup> Employment data queries do not align perfectly with each IPZ but offer the best approximation in light of data limitations.

Given the constraints of the data and the relative newness of some IPZs, sufficient data is currently available to conduct analysis on only eight IPZs. Most of these IPZs are associated with industry clusters of moderate employment size – a workforce of from 1,000 to 11,000. The outliers are Ellensburg, with only 65 workers, and Snohomish, with 43,333 workers in December 2011.

All except Bothell have shown positive growth trends for 2002 through 2011 (Figure 1). The Bothell industry cluster has followed an unusual path – It saw significant declines

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<sup>3</sup> In the future, we would like to assess to what extent the policy intervention of an IPZ designation influences these outcome measures. To do this, one must also develop ways to standardize, collect, and normalize information about the different ways, and degrees to which, the designation of an IPZ supports regional economic development.

from 2002 to early 2005, mostly plateaued from early 2005 to early 2007, and then saw fairly strong growth thereafter.

The IPZs as a whole exhibited above-average employment. Total employment grew within these eight IPZs from the time of designation to present. This contrasts with total statewide employment, which saw overall declines during that period.<sup>4</sup>

**Table 1: Employment Trends for IPZs with Sufficient Data**

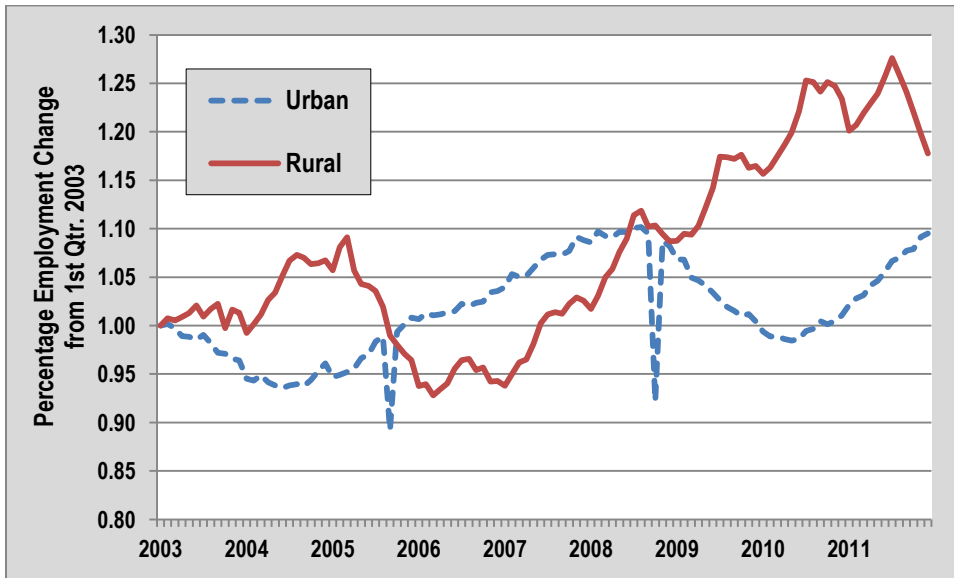
	Bellingham	Bothell	Ellensburg	Seattle	Snohomish	Spokane	Tri-Cities	Walla Walla
Designation Year	2007	2007	2009	2007	2007	2007	2007	2007
4th Qtr 2011 Employment Level	2,466	2,462	65	3,462	43,333	1,035	10,559	707
2002 to 2011 Trend*	0.1%	0.0%	0.8%	0.2%	0.8%	0.6%	0.2%	0.8%
Trend* 2002 to designation year	0.0%	-0.6%	3.0%	NA	0.1%	0.3%	-0.1%	0.6%
Trend* since designation year	-0.1%	0.5%	3.4%	NA	0.4%	-0.1%	0.6%	1.0%
Employment Low	Mar-11	Apr-07	Sep-08	Nov-09	Mar-07	Jun-10	Mar-07	Mar-07
Employment High	Sep-09	Jun-11	Dec-11	Aug-10	Dec-11	Apr-08	Aug-11	Nov-11
Employment Change from Low to December 2011	6.8%	22.1%	214.5%	4.9%	39.8%	20.5%	30.3%	101.2%

\* For trend we used the slope of the linear regression of the three-month moving average for the relevant period.

Figure 2 summarizes employment patterns broken out by the four rural IPZs versus the four urban IPZs. For the first several years after designation, rural IPZ growth outpaced that of urban IPZs. This reversed in 2011, when rural IPZ employment faltered and urban IPZ growth accelerated.

<sup>4</sup> For this comparison, the logged slope of three month moving average employment from 2007 to 2011 was used. For employment within the eight identified IPZs, the slope was a positive 0.1 percent. For total state employment the slope was a negative 0.1 percent.

**Figure 2: Percentage Change in Urban and Rural IPZ Employment, 2003-2011**



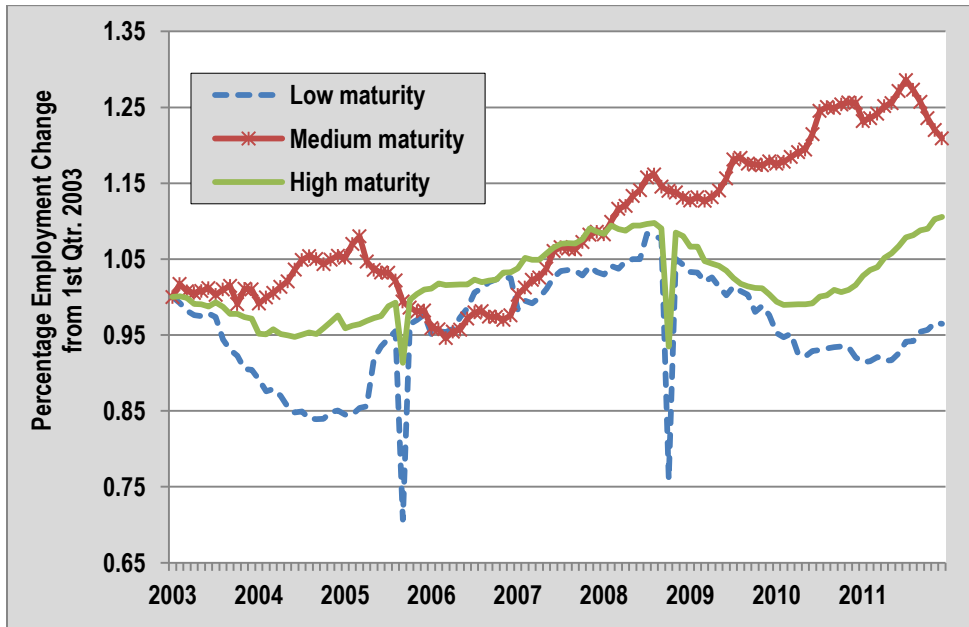
Source: Washington State Employment Security Department, QCEW

Figure 3 compares employment patterns by level of industry maturity. Medium-maturity IPZs showed employment patterns similar to rural IPZs, and strong growth until declines in 2011. IPZs of low and high maturity had patterns similar to urban IPZs, with job losses through mid-2010 followed by solid job gains.

The period of most interest to this report is how an IPZ cluster fared after designation. All except Bellingham and Spokane trended positively after designation, and this was especially the case for Ellensburg and Walla Walla. Both Bellingham and Spokane moved in close conjunction with overall statewide employment, indicative of being driven by wider economic trends. Of the two, however, Spokane has shown more resilience, in part due to the announcement of a medical school and relocation of companies to the IPZ.

On a cautionary note, when looking at data over the recession and recovery period, one should be careful in downplaying the impact of the wider economy. For example, attributing IPZ employment growth that occurred after early 2010 to the actions taken by the IPZ – as opposed to being driven by economic recovery – is questionable.

Figure 3: Percentage Change in IPZ Employment by Maturity Level, 2003-2011



Source: Washington State Employment Security Department, QCEW

## Patent Data

Patent data represents a good potential source of gauging innovation and research. We attempted to use micro data from the U.S. Patent and Trademark Office<sup>5</sup> to drill down to the specific geography of each IPZ, but there were too many missing variables in that dataset. The Patent Office does make available patents-awarded data by metropolitan and micropolitan area and by technology class. Using this data to gauge IPZ progress is limited, as there is no way to know if it was developed within the confines of the IPZ geography, nor if the IPZ influenced it in anyway. However, given that this was the only option for patent data and it does give a picture of intellectual property development, we will present it with the aforementioned caveats.

The general approach was to identify technology classes that matched the IPZ focus. The data runs from 2006, the year before most of these IPZs started, through 2010, the most recent year of available patent data. Patent data was not collected for the four newest IPZs as they were designated after 2010.

The metropolitan area of Seattle-Tacoma-Bellevue is rich in the variety and number of patents. However, it covers six different IPZs as well as the bulk of the state's economic activity. So for example, the Snohomish IPZ focuses on aerospace. The patent tables

<sup>5</sup> <http://www.uspto.gov/>

located in the Appendix 3 for Snohomish would include any aerospace-related patent from King, Pierce, and Snohomish counties. There may also be patents that were developed by aerospace companies for use in aerospace, which are not apparent by the patent technology class and hence not included in these tables.

Rural areas have something of a different problem. While the geography tends to be well matched, there are typically many fewer patents and technology classes. In some cases, such as Ellensburg, there were no patents developed in technology classes that matched the IPZ's focus. This may have something to do with the particular focus of renewable energy technologies as well as the rural location. It may also be related to the lack of a large research university within the area.

Nevertheless, the overall trend has been positive. A total of 255 patents were awarded in 2008. This number rose to 342 in 2009 and to 447 in 2010. This growth amounted to increases of 75 percent between 2008 and 2010. This was somewhat higher than the increase of 50 percent increase in all patents awarded within Washington State between 2008 and 2010. Although this approach is limited in drawing specific conclusions, it does show that within the roughly matched IPZ geographies and particular areas of interest there has been significant growth in the number of patents.

Appendix 3 shows patents awarded by metropolitan area and technology class, corresponding to the IPZs.

## Analytical Framework

This section analyzes the IPZs based on self-identified goals, metrics to measure an IPZ's success in meeting its own goals, and outcomes (ways in which the IPZ has added to the clusters economic development). This is presented via an analytical framework based on regional and industry maturity characteristics of the IPZ to gauge their goals, outcomes, and metrics.

Bellingham, Clallam, Ellensburg, Grays Harbor, Pullman, Richland, and Walla Walla were considered to be rural, whereas all others were considered to be urban.

As for cluster maturity, if it is represented by only a few firms it was categorized relatively immature (low maturity). If there is a modest clustering of firms and some involvement with an educational institution, it was considered moderately mature (medium maturity). If the cluster includes nationally or internationally recognized firms it was considered to be very mature (high maturity).

Consideration was also given to analyzing IPZs based on whether they were located in distressed areas. However, only one IPZ, Grays Harbor, was in an area clearly defined as distressed.

Appendix Table 4 contains goals, metrics, and outcomes as they were outlined in each IPZ's business plan.

### **Goals**

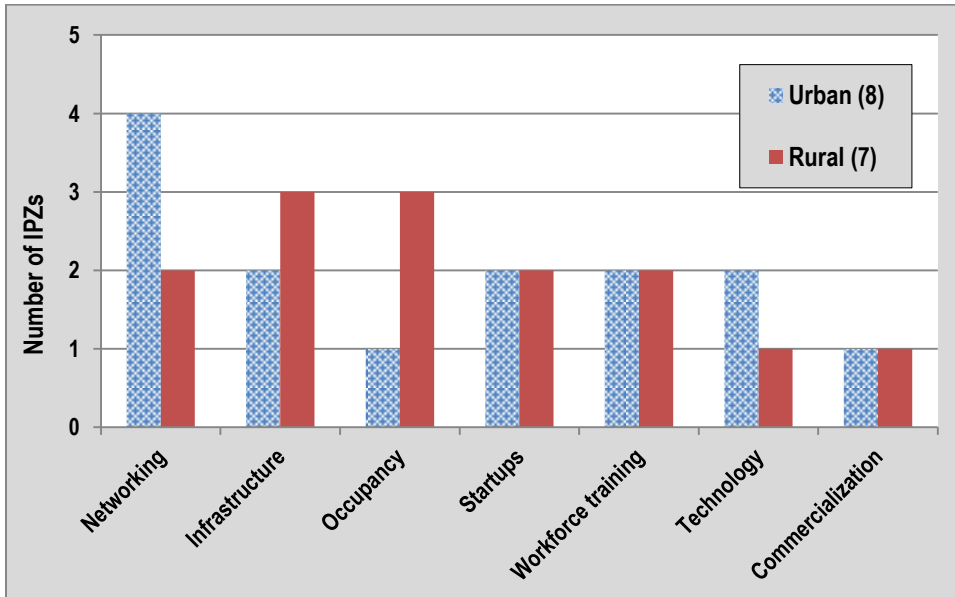
The goals were taken from each IPZ's business plan and collated around similar themes, such as creating partnerships, building infrastructure, and increasing firm occupancy within the zone. The seven most frequently cited goals are shown in Figures 4 and 5.

Networking/partnerships was most commonly cited – by six of the 15 IPZs. It was more commonly a goal of urban IPZs, and IPZs with moderately mature clusters. Conversely, the second most common goal, infrastructure, was more likely to come from rural and less mature clusters. This is a pattern that repeats itself, where urban and regions with mature industries tend to have existing infrastructure, but need networking and partnering to better compete nationally and globally. At the same time, IPZs that are rural or focused on newer industries often lack infrastructure.

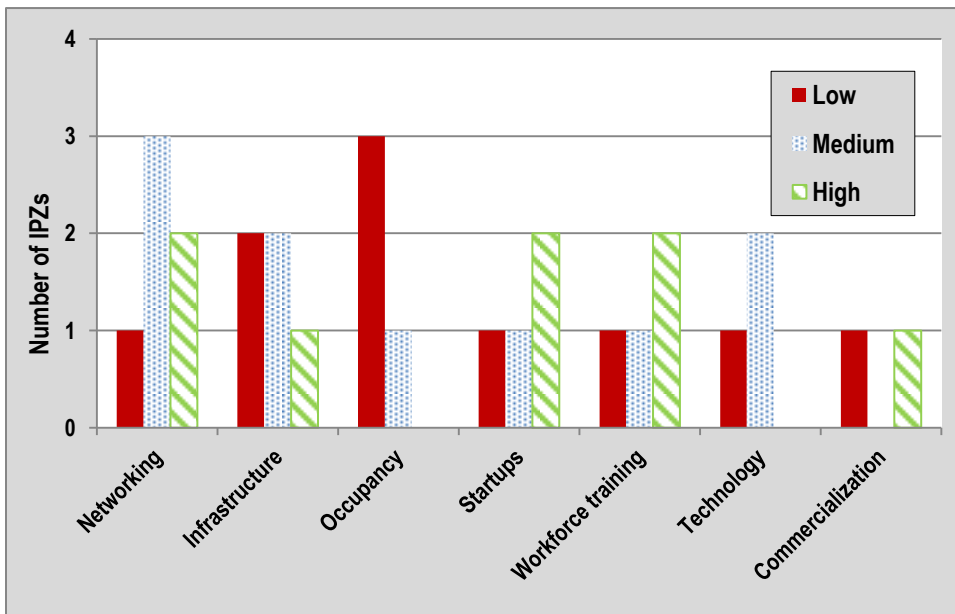
The goals of higher occupancy (of firms within the IPZ boundary) and more startups are related in that both seek growth in the number of participating firms. However, occupancy was mostly a rural and less mature goal, while startups were split between urban/rural and tended toward very mature IPZs. IPZs that stressed the number of startups as a high priority were typically in industries that are evolving rapidly, such as gaming, clean technology and energy, and global health. While at first glance one might

assume a rapidly evolving industry is, by definition not mature. However, the IPZ was considered mature for our purposes if it has nationally or internationally prominent firms. The latter three goals (workforce training, technology, and commercialization) showed no particularly strong maturity or geographic trend.

**Figure 4: Most Commonly Stated Goals by Geography**



**Figure 5: Most Commonly Stated Goals by Maturity**





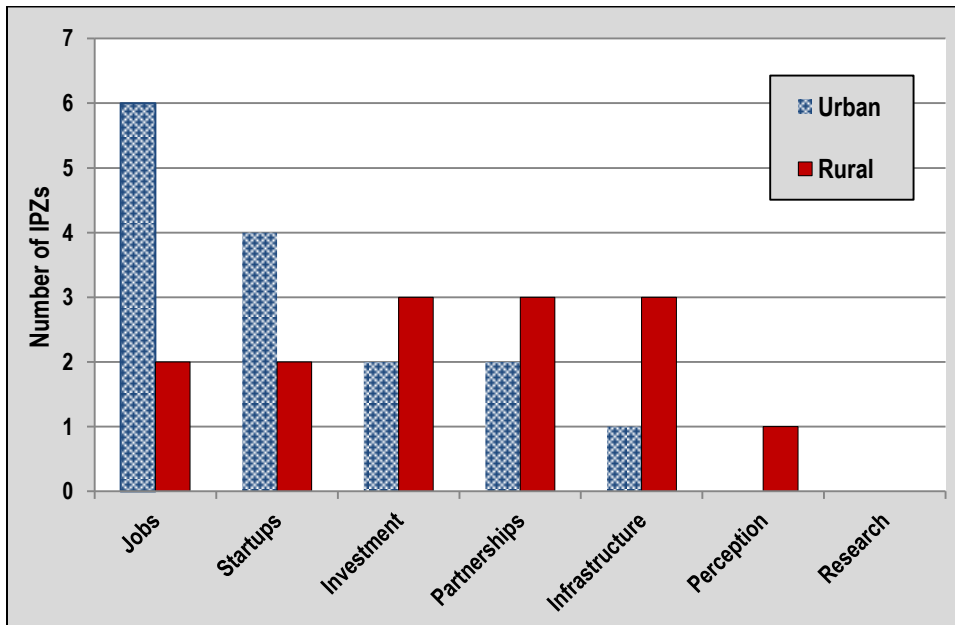
## Self-Defined Metrics

One of the questions asked in the interviews with IPZ administrators was, “Based on your experience, what is a fair metric of your IPZ’s success?”

More than half of the IPZs chose job creation as an important metric. Job creation was a particularly urban sentiment as three-quarters of those that mentioned it were located in urban areas (Figure 6). However, job creation is a metric shared about equally across IPZ industry maturity levels. The number of firms attracted or the number of new startups is also a metric chosen more often by urban IPZs.

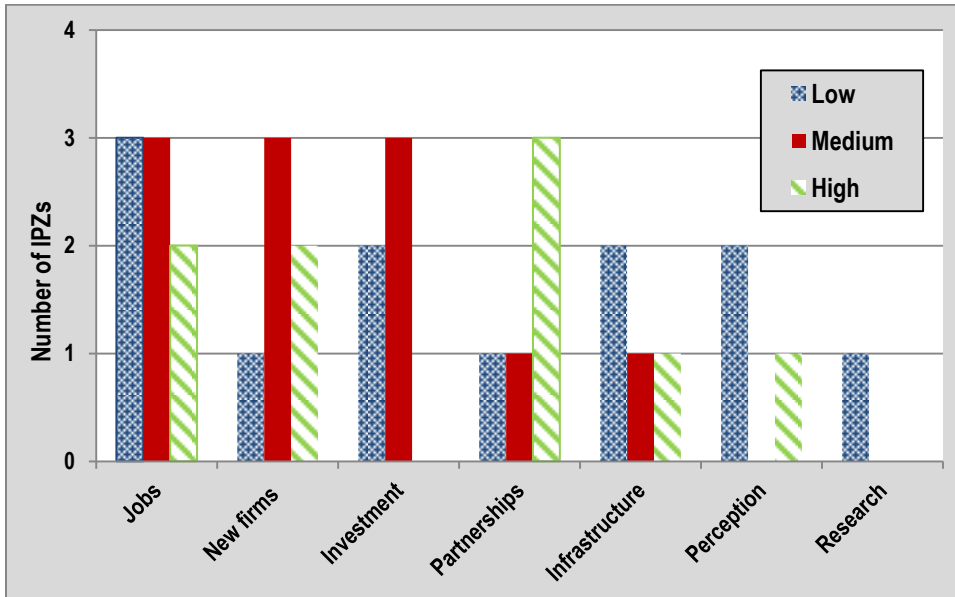
Partnerships show up as a goal, a value-added, and a metric, and in every case it tended to be associated with urban and mature IPZs. It is very clear that for urban and mature IPZs, improving the quantity and quality of partnerships is a high priority.

**Figure 6: Metrics by Geography**



Less-mature IPZs were likely to have chosen investment and perception as a metric (Figure 7). This is not surprising in that relatively immature sectors would likely be in need of investment to grow, and would have a fairly low profile.

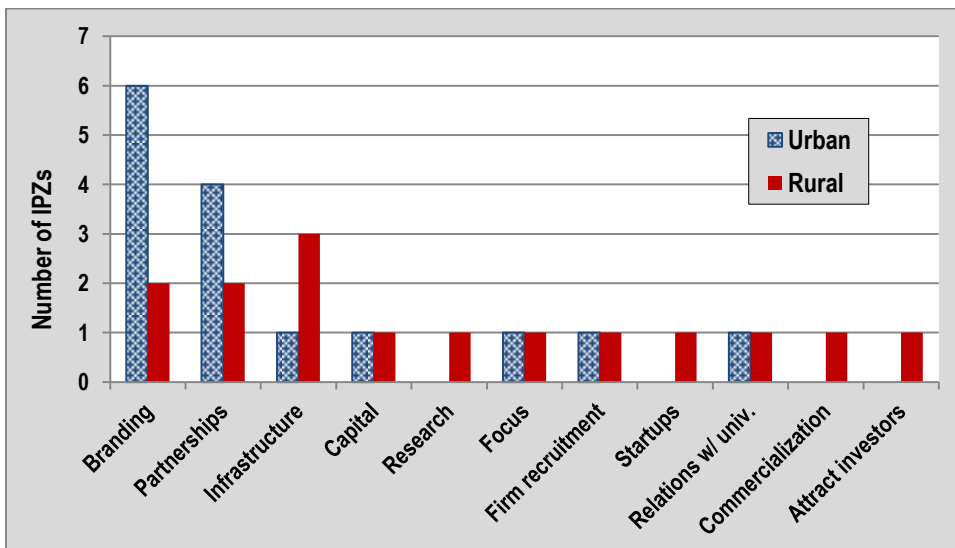
**Figure 7: Metrics by Maturity**



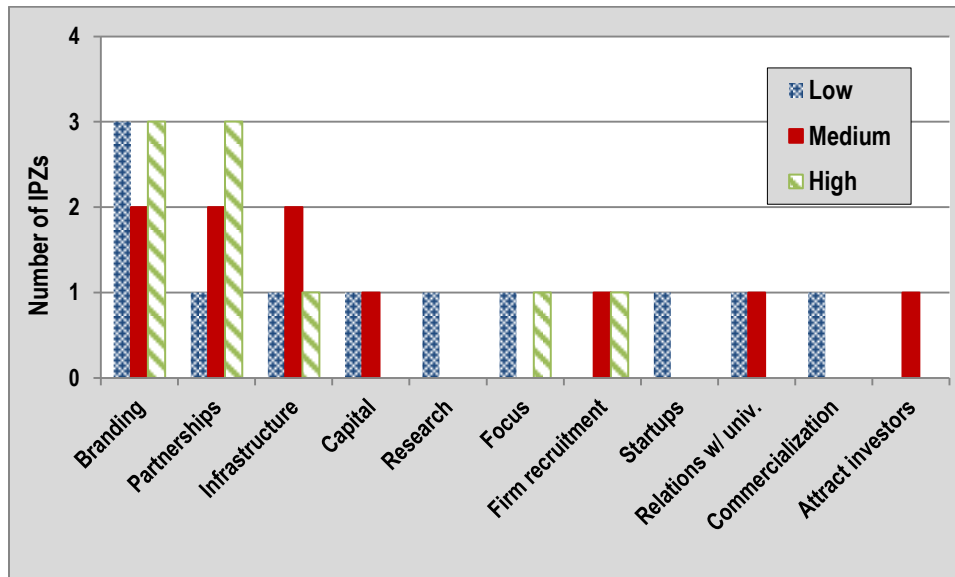
## Outcomes

IPZs were also evaluated on the types of outcomes they provided their clusters. This question was trying to get at the value of the IPZ program to the local economy and the particular sector. The answers came from telephone interviews with administrators and other IPZ staff or partners. Like the previously discussed goals, the answers were grouped by similar themes with the most commonly cited answers displayed in Figures 8 and 9.

**Figure 8: Outcomes by Geography**



**Figure 9: Outcomes by Maturity**



Branding – the role of raising the sector and geography’s visibility – was the most commonly cited benefit offered by IPZs; more than half of the IPZs mentioned this outcome. This value was more likely provided by firms within urban clusters (six of the eight), but it was as likely to be provided by relatively immature clusters as by those that are mature.

Partnerships and infrastructure were the second and third most common value provided. Partnerships also tend to be urban, but with a strong tendency to be most mature. As with the goals, infrastructure is a benefit more typically provided by rural and moderately mature IPZs.

There were no immature IPZs that had company recruitment as an outcome. Outside of branding, there was no distinct pattern to benefits offered by immature clusters. In short, for the most part urban and relatively mature IPZs saw their goals and actual outcomes to be aligned. This is not unexpected, in that a relatively immature IPZ has not had time to realize its goals.

## **Engagement**

IPZ administrators were asked to grade their level of engagement with both educational institutions and industry. The scale was from 1-5, with 5 being the highest level of engagement. The overall levels were fairly high, 4.17 for education and 4.35 for industry. Urban areas had identically high levels of engagement with both industry and education. Rural areas had somewhat higher engagement levels with industry than with education.

This is in large part due to where four-year and large research universities are located. All areas had post-secondary education partners, but in some regions four-year options were

very limited. This was mitigated somewhat by the fact that technical and community college partners were mentioned as being flexible and very easy to work with. In one case (Walla Walla), the local community college has been the driving force behind much of the IPZ activity.

The biggest discrepancy in engagement exists between education and industry for the least mature clusters. For these IPZs engagement with education was a relatively low 3.75, but for industry it was a strong 4.50. This would indicate that where strides are most needed is partnerships with colleges and universities.

In some cases, it may well be that the high level of scores for industry were more based on quality than quantity. In other words, they might have good partners, but not necessarily enough partners, particularly in the case of relatively immature clusters.

### **Making Sense of the Data**

Sifting through goals, metrics, outcomes, and engagement levels can assist policymakers in better understanding the diverse ways the IPZ program has been used around the state. For example, it is clear that rural areas are more focused on infrastructure and bringing new business in, whereas urban areas tend to be more focused on gaining and keeping jobs, and partnering with existing firms.

However, currently available quantitative data tells us relatively little about why certain IPZs are more successful than others. Here qualitative research can also be helpful. Toward that end, this study interviewed more than 40 zone administrators and partners of the state's 15 IPZs. The following section includes case studies and summary findings of profiles.

## IPZ Interviews

Previous sections of this report have focused on analyzing the program as a whole, but IPZs are not homogenous. The intent of conducting interviews with each of the IPZs was to better understand the experience and unique challenges of each IPZ.

These interviews were conducted with each IPZ, typically with the administrator. As with the quantitative and qualitative data discussed in previous sections, the goal of the interviews was to evaluate IPZ contributions and ability to further regional economic development.

This section includes case studies on two IPZs: Tri-Cities and Grays Harbor. The original intent was to include a Western Washington rural IPZ and an Eastern Washington urban IPZ, covering both geographic and population-density diversity. According to this report's analytical framework, Spokane is the only eastside urban IPZ. Due to scheduling constraints, the researchers were unable to do an in-depth interview with the Spokane IPZ, so the Tri-Cities IPZ was interviewed instead.

Also included is a summary of findings of the interviews with all IPZs.

In addition, Appendix 5 has one-page profiles of all 15 currently designated IPZs as well as one for the non-designated IPZ, Vancouver.

### **The Tri-Cities Research District** (Rural, Medium Industry Maturity)

#### **Origins**

Like most IPZs, the Tri-Cities Research District (the district) was created in December 2007, with the purpose of developing a more comprehensive, collaborative, and concerted effort toward innovation-focused economic development. But the origins of the effort are rooted in prior initiatives to transform a 4,000-acre parcel of real estate in Richland into a science and technology park.

The administrative structure overseeing the park was originally a 501(c)(6) nonprofit organization, with participation by the Port of Benton, city of Richland, Pacific Northwest National Laboratory (PNNL), Washington State University (WSU), and private-sector real estate developers. Within this framework, leadership shifted more than once – from PNNL to the university, and finally to the port. With the park space idling, the port reinvigorated the effort, resulting in a more coordinated and proactive strategy that redirected the park's 501(c)(6) toward purely economic development and regional marketing efforts.

The revived effort attracted \$180,000 in federal grants to fund a study that ultimately helped form the basis for the IPZ's strategy. The application for IPZ designation largely

reflected this existing effort and the objectives delineated by the group in meetings prior to 2007. The district governed by the 501(c)(6) was reduced to 1,700 acres, and its new boundaries and the IPZ's are identical.

### **Recent Activities**

In the past two years, roughly \$40 million in infrastructure investments have been made in the park, with more than 880,000 square feet (federal and private-sector space) now available for research activities. The IPZ continues to plan for a more mixed-use development approach. Currently the IPZ is home to Innovate Washington and an incubator facility that provides space for testing and prototyping of new products, and technical assistance for new firms. Sixty private-sector companies are located in the IPZ, one of which is an investor in one of the buildings. Recruitment of private-sector businesses has been, and will continue to be, a primary objective.

The IPZ has also been active in viticulture. The port has been working with local farmers to transform organic waste from their vineyards into an energy source, and was recently successful in obtaining a federal appropriation for the project through support from U.S. Senator Patty Murray's office. This was the first such grant with a research and development (R&D) focus, compared with past appropriations that were primarily infrastructure focused. WSU has a joint biomass energy facility with PNNL at Bioproducts, Sciences, and Engineering Laboratory (BSEL), which brought in Dr. Birgitte Ahring, a "STAR researcher."

The IPZ is looking at how to work with PNNL on developing a larger-scale manufacturing site, enabling both R&D and manufacturing in the same area.

The district has also been exploring ways to attract Employment-Based Immigration: Fifth Preference (EB-5) investments. The port participated in Governor Gregoire's missions to China in 2010 and India in 2012 to recruit potential investors into the region. Recently the district looked into creating its own EB-5 regional center but chose to collaborate instead. An EB-5 application covering the zone has been submitted by one of the district's private partners. In addition, district leaders serve on the board of directors and the advisory board for the EB-5 effort.

The strategy is now to pitch the region's intellectual and research assets to foreign firms with expertise in the electric grid, energy, and bio-products. This strategy is based largely on the decision made by Chinese solar technology firm GCL to locate an R&D facility in Richland in order to be near PNNL.

### **Leadership Structure**

The IPZ board meets monthly on administrative issues, and holds an annual stakeholder meeting with companies, Innovate Washington, congressional representatives and staff, and other community members. Meetings focus on discussion of new opportunities. The

IPZ board is also active in the Mid-Columbia Energy Initiative, which has subcommittees focused on specific areas of opportunity, e.g., energy bioproducts, transportation, and how to better market the region as an energy hub. For instance, there is growing federal interest in small-module nuclear reactors. Some of the Hanford facilities were built in the 1980s but were never used, so the group is now exploring how to leverage the millions spent on this infrastructure. There is also active research on the smart electric grid, spearheaded by PNNL and its leadership in a five-state project.

The IPZ board has its own budget, which is administered through the port. Many of the contributions are in-kind, e.g., donated office space at the port. The district lacks funding for advertising, marketing, participation in trade shows, and an expanded website presence.

The Tri-Cities Economic Development Council (TRIDEC) is represented on the board, and its focus includes the biosciences, energy storage and grid, viticulture, and food processing. This broader focus of TRIDEC limits collaboration on IPZ-focused efforts. For instance, while the port coordinates IPZ marketing for recruiting technology companies, TRIDEC recruits a wider range of industries. TRIDEC has only one business recruiter, who does not have the time to adequately help the IPZ in its recruiting efforts. However, TRIDEC is able to help brand the region as a hub for tech activities.

Despite minimal resources, the IPZ does not plan to solicit additional outside funds until a new tech company has been recruited to the district.

### **The IPZ Effect on Collaborative Efforts**

Based on interviews with the Tri-Cities IPZ, it is difficult to discern what might have happened differently without IPZ designation. As previously discussed, there was a local initiative spearheaded by the city of Richland, Port of Benton, PNNL, WSU-Tri-Cities, and private-sector stakeholders to restart a regional innovation economic development strategy to leverage existing, available real estate assets and research capabilities.

The IPZ program's greatest positive impact could very well have been the process of applying for IPZ status. That process helped crystallize the goals of the group and provided a framework that encouraged a shared vision and an emphasis on a "big goal." Even though efforts along these lines were already underway, the IPZ application process and the state government affiliation extended the reach of the existing initiative, bringing in additional partners such as the city of Pasco.

The IPZ designation also provides a strong signal to both the federal government and international investors that there is a legitimate, coordinated economic development effort, with a document outlining the group's strategic vision.

On the federal side, having an IPZ strategy and designation essentially adds an additional "credential" and communicates to federal agencies that future investments will yield

higher economic development returns compared with regions lacking such a designation. On the international side, the region has strong connections through the large population of foreign doctoral-level researchers and engineers working at PNNL. The designation signals government support, which is viewed more favorably among companies (and prospective investors) from countries such as China.

Lastly, according to the administrator interviewed, the IPZ designation encourages stakeholders to think even more about how to grow their community by leveraging existing capabilities. PNNL already leverages its assets for the private-sector activities better than any other national laboratory in the U.S., and is now exploring additions to the lab's portfolio, including ways to scale up activities in the biosciences and energy (e.g., Mid-Columbia Energy Initiative). The IPZ helps validate the Tri-Cities view that north Richland is the best place for these activities to occur.

### **Grays Harbor IPZ** (Rural, Low Industry Maturity)

#### **Origins**

The Grays Harbor IPZ was founded in 2007 with the intent to capture industrial byproducts as resources, as well as sharing research and development efforts among local companies. The initial IPZ concept was a research park within a narrowly defined geographic boundary.

Early on, the IPZ connected with private industry to see what projects might evolve, resulting in relationships with Wishkah River Distillery, Imperium Renewables, and Paneltech Products, Inc.

The IPZ received \$1 million in funding at the time of designation. That funding and a 2010 U.S. Small Business Administration (SBA) grant of \$427,500 allowed acquisition of a 20,000-square-foot building on port property. The building was then renovated into a R&D facility and equipment was purchased, so that the building and equipment could be used for more than one purpose and tenant.

#### **Current Activities**

The IPZ quickly found that both the geographic boundary and the tightly defined cluster were ill suited to its region and industries. The IPZ leadership concluded that proximity to resources, such as forests and oceans, and quality of life are critical to competitiveness for a rural IPZ. The leaders also recognized the need to provide access to infrastructure and facilities.

The original idea for a new R&D facility was canceled after The Great Recession forced two private-sector partners to scale back. At that point, it was decided to use an existing building, and the IPZ found a distribution center that it was able to repurpose as an R&D facility and incubator – now the Coastal Innovation Zone (CIZ) building. Phase I of the



renovations was completed in October 2011, and in 2012 the Legislature awarded \$750,000 to complete renovation work on the R&D incubator facility and further equip the lab. The building houses an incubator, product development/proving space, and the lab. One current tenant, Reed Composites, researches and develops various products, some of which in the future might be manufactured in the region by new firms.

The facility has the following features:

- Designed to support any start-ups.
- Lab on second floor, R&D component.
- Warehouse, manufacturing, and office space.
- Shared lab and office space.
- Functioning distillery.

The IPZ continues to focus on forest product-based sustainable industries and renewables, but has found some unusual partners, such a local seafood company, Ocean Gold. The company, which employs 700 in the region, has begun using waste products for products such as fertilizers. The IPZ has helped the company find markets for its product.

### **Leadership Structure**

The IPZ is administered by the Port of Grays Harbor, with assistance from the Satsop Business Park and the Grays Harbor Economic Development Council. Other participants include Grays Harbor College, Regional Education and Training Center (RETC), Pacific Mountain Workforce Development Council, Imperium Renewables, and Paneltech Products.

### **The IPZ Effect on Collaborative Efforts**

Grays Harbor College, the local community college, has been supportive of the IPZ, including being a catalyst for drawing resources from WSU, which has a branch campus at the college.

Regional workforce planners have attempted to find ways to retain local talent and provide post-education opportunities. To meet future workforce needs it was deemed necessary to better align preschool, K-12, and post-secondary education institutions. One result is the RETC, which is part of the five-county, WIRED grant program. RETC offers a variety of vocation-specific trainings, such as firefighting, that are not found in a traditional college system.

Local leaders found high school students need more information on career pathways, and they been working with teachers and counselors at high schools to inform students about potential opportunities in the community for graduates. In addition, the Grays Harbor area possesses the state's second-largest "Business Week" career fair for high school students.

The IPZ has acted as a catalyst for greater collaboration. According to IPZ administrators, the designation builds awareness of existing assets, especially locally among other stakeholders and businesses. An example of the benefits of this is the collaboration between Cosmos and Paneltech. Cosmos provided test waste material, files, and data for Paneltech's research in determining how to process their mill effluent for broader industrial applications. Without the IPZ designation, the port would not have funded this \$25,000 project.

Externally the IPZ serves as branding; internally, it serves as a platform for raising awareness of what the community has to offer.

### **Challenges**

The greatest challenge in organizing the IPZs initiatives has been finding the time and funding.

An additional obstacle has been obtaining Leadership in Energy and Environmental Design (LEED) certification required to use state capital funding. IPZ officials argue that the certification scoring system is overly rigid. Examples include requiring rain barrels in an area that doesn't lack for rain and giving preference to locations with more commuter transit options. The IPZ reports having to spend \$1.5 million on renovating and remodeling the CIZ building, which was hard to sell to the public.

An IPZ is like a small business that is trying to meet existing needs before thinking about expansion. Things change fast in the private sector, but slowly in the public sector – it is a challenge to stay nimble enough to match the private sector.

Ports are primarily revenue-based, relying on robust cash flow to support ongoing and new development projects. The 2007 IPZ funding made it possible for port staff to devote time to developing business for the IPZ, which in turn has generated more shipping business for the port. In 2007, seven ships called on Grays Harbor; in 2011 there were 47 vessel calls; and in 2012 the port is on pace for 85 ships.

### **Interview Findings**

A handful of findings can be drawn from interviews with the IPZs. IPZs have functioned as small business incubators, providing flexibility in housing, access to shared research and development laboratories and facilities, and access to expert advice and training opportunities. These elements together can support nascent businesses through their most difficult startup years. The direction of each IPZ was 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.

Administrators and partners reported that IPZs provide a useful tool in promoting a specific geography and industrial cluster. The ultimate goal in some cases is to become the “Silicon Valley” of their particular industry. It is also important to note that the program is driven at the local level by local decision makers. As stated by one of the administrators, “Economic development occurs locally with good planning, investment in talent, and effective training systems.”

The legislation originally termed IPZs as a type of “technology park,” but this does not fully describe the emerging nature and more flexible boundaries of many of the zones. Certain types of industrial clusters, such as wind energy, are particularly difficult to constrain within a tight boundary. Administrators made it clear that flexibility is the key element to their success, and that this has allowed for a variety of approaches and many disparate outcomes.

Several zones have reassessed their direction and refocused on new industries. For example, in 2011 Clallam renewed its focus on algae and expanded it to other renewables. Meanwhile, South Lake Union shifted from life sciences to global health and Walla Walla added energy as a third focus. The flexibility of IPZs is particularly important in rural areas, where they tend to have fewer opportunities available.

### **Suggested IPZ Program Improvement Suggestions**

The following were frequent or policy-significant suggestions from the IPZ administrators and stakeholders:

- **Offer tax incentives** – Numerous respondents complained that IPZs were at a disadvantage relative to other states in not being able to offer tax incentives to businesses to relocate within the zone.
- **Provide operating funds from the state** – All IPZs stated a desire for operational funding, but the expressed need for it ran the gamut from “that would be nice” to “without it the IPZ program has nothing to offer our community.” The differing views were reflective of the varying structures of IPZs. IPZs that are supported by large organizations tended to be less insistent about needing operational dollars.
- **Provide ways for IPZs to share ideas with each other** – An IPZ’s operational performance could be improved by networking and collaboration with other IPZs.
- **Reduce record keeping burden** – The state mandates the collection of evidence of anticipated private investment, job creation, innovation, and commercialization within the zone. This represents a significant time commitment on firms within the zone as well as IPZ personnel.
- **Allow for flexibility regarding IPZ geographic boundaries** – This is particularly pertinent for rural IPZs, which often lack high-density concentrations of industry.

- **Continue to appropriate capital funds** – Since the program’s inception, 16 capital grants have been awarded, totaling more than \$20 million.
- **Provide incentives to higher education** – Sweeteners are needed to encourage greater academic participation with IPZs, such as free or discounted laboratory space or assistance with commercialization.

## Conclusion

The goal of this report is to evaluate each IPZ's contribution to furthering regional economic development. Using quantitative approaches (employment and patents) and qualitative approaches (reviewing business plans and conducting interviews with each IPZ), there is evidence that IPZs have played a positive economic development role.

Data show that IPZs have experienced above-average employment and patent growth within the identified industry clusters when compared to overall statewide employment. Likewise, interviews identified many ways in which the IPZs brought value to their regions. However, the extent to which those IPZ efforts influenced the employment and patent numbers is inconclusive.

For the first time, the IPZ biennial report has compiled and analyzed baseline employment and patent data. Limitations on the availability of data and the ability to tease out direct impacts of the IPZ program constrain the amount of analysis and subsequent findings. This is, however, countered by fact that it is standardized data. Perhaps most importantly, this baseline data should be increasingly useful in future evaluations of the program.

From business plans and self-assessments it is clear that the geography (whether an urban or rural location) and the relative industry maturity influenced IPZ goals, performance metrics, and outcomes. Urban and more mature IPZs focused on partnering and job creation. Rural and less-mature IPZs put more emphasis on creating appropriate infrastructure and attracting investments. Reported levels of engagement with educational and industry partners was generally high. Urban areas tended to have equally strong engagement with both education and industry, whereas rural areas typically had higher engagement with industry than with education. The maturity level of the IPZ had little effect on the level of partnership engagement.

From interviews with IPZ administrators, it has become apparent that IPZs are more of a strategy than a program. This factor highlights both the strengths and weakness with IPZs. Being more of a strategy allows for greater flexibility and ability to adapt to local conditions and needs. However, it has also limited some of the tangible benefits for propelling further economic development.

## Data Sources

Washington State Employment Security Department. (2002-2011). *The Quarterly Census of Employment and Wages*. Lacey, WA.

US Patent and Trademark Office. (2006-2010). *Patenting in a U.S. Metropolitan and Micropolitan Areas, Utility Patent Grants*, Alexandria, VA.

## Appendix 1: Employment Data Queries

### Customized Data Queries for Each IPZ

IPZ	Focus Area(s)	Geographical Unit	Location	NAICS
<b>Auburn</b>	Sustainable industrial redevelopment	Zip Codes	98001, 98002	237, 3364, 333, 335, 338, 221310, 5413, 5414, 5415, 5416, 5417, 493
<b>Bellingham</b>	Clean transportation, industrial design, advanced materials, energy technologies	Zip Codes	98226, 98225	31, 5413, 5414, 5415, 5416, 5417, 423690, 811219
<b>Bothell</b>	Biomedical devices/manufacturing	Zip Codes	98011	325413, 334510, 334517, 334517, 339113, 339114, 339115
<b>Ellensburg</b>	Renewables	Zip Codes	98926	221115, 237130, 237130, 333414, 333611, 423830, 541590, 624229, 926110, 926130, 334515
<b>King Co.</b>	Financial services	County	King County	52
<b>Pullman</b>	Lean information technology and data center technologies, smart grid technologies, smart farm and smart home technologies	--	<i>Not permitted due to data restrictions.</i>	335314, 518210, 5413, 5414, 5415, 5416, 5417
<b>Redmond</b>	Interactive media	Zip Codes	98052, 98053	541519, 541810, 514190, 541511, 511210 (excluding MS), 335999
<b>Snohomish</b>	Aerospace	County	Snohomish County	336 (3364 not permitted due to data restrictions)
<b>Seattle</b>	Global health	Firms	List of businesses	
<b>Spokane</b>	Biomedical	Zip Codes	99201, 99202	339116, 541690, 541711, 541712, 813212
<b>Tri-Cities</b>	Energy storage, smart grid & other	Street Addresses	3100 George Washington Way, Richland WA 99354	335, 5413, 5414, 5415, 5416, 5417
<b>Tacoma</b>	Urban clean water technology	Street Addresses	E 3rd Street (500-599); E 7th Street (500-599); E F Street (200-1099, even only from 1100-1498); E D Street (200-1510); E 15th Street (401-599 odd only); E 11th Street (300-599); E City Waterway (1401-1499, odd only)	221310, 333318, 5413, 5414, 5415, 5416, 5417, 562910, 621511
<b>Walla Walla</b>	Viticulture and water management	County	Walla Walla County, Columbia County	115113, 111332, 237110, 312130, 321920, 327332, 333111, 332322, 5413, 5414, 5415, 5416, 5417
<b>Grays Harbor</b>	Sustainable industries	--	<i>Not permitted due to data restrictions.</i>	339999, 321, 325, 333
<b>Clallam County</b>	Composites, marine, renewables	County	Clallam County	221118, 313310, 335991, 325510, 333618, 334220, 334513, 335314, 335911, 423860, 441222, 447190, 488330, 541330

## Appendix 2: Employment Data Methodology

All firms with staff covered by the unemployment insurance program (most firms that are not sole proprietorships) must report employment and wages paid out on a monthly basis. Each quarter this data is aggregated at the two-, four-, or six-digit NAICS code level and published on the ESD website and through the U.S. Bureau of Labor Statistics. The normal reporting process does not align with the unique geographies of most IPZs, so a special query was done, with the release of results subject to approval by ESD based on non-disclosure restrictions.

For each query, we needed to approximate the reach and activities of an IPZ using NAICS codes and geographic units compatible with the Quarterly Census of Employment and Wages (QCEW) database (see Appendix 1). To determine the set of NAICS codes that best approximated each IPZ, we made our selections based on:

- The descriptions of each IPZ as part of their application.
- Including NAICS for businesses cited as examples of resident firms in each IPZ.<sup>6</sup>

As a case in point, for the Redmond IPZ in interactive media, our query included aggregate employment for the NAICS codes 541519, 541810, 514190, 541511, 511210 (but excluding Microsoft), and 335999, isolated for the zip codes 98052 and 98053. In another case (Seattle Global Health IPZ), we needed to instead collect a list of businesses identified by the IPZ administrator as belonging to the IPZ and query aggregate employment among these firms (though data could only be reported as far back as the third quarter of 2009, due to nondisclosure restrictions).

In other cases, the IPZ was so small that using a zip code could grossly distort employment figures; we instead used a geographic query based on specific streets and addresses (e.g., Tacoma, Tri-Cities). And for still others, no alternative query could overcome the restrictions imposed by the U.S. Bureau of Labor Statistics (e.g., Pullman, Grays Harbor).

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<sup>6</sup> For the latter approach, we referred to the business look-up function available on the Washington State Department of Revenue's website: <http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/>. Each registered business in the state has a publicly assigned unified business identification code (UBI), tax registration number (often the same as the UBI), and NAICS code.



## Appendix 3: Patent Data Tables

### Bellingham

#### Industrial Design, Advanced Materials Applications and Energy Technologies Focused on Clean Transportation, and Training for Industries of the Future

Class	Class Title	2006	2007	2008	2009	2010	Total
310	Electrical Generator or Motor Structure	3	0	1	2	2	5
114	Ships	1	4	0	1	0	1
280	Land Vehicles	2	0	2	1	0	3
123	Internal-Combustion Engines	1	0	1	1	0	2
180	Motor Vehicles	0	0	0	1	1	2
418	Rotary Expansible Chamber Devices	1	0	0	1	0	1
104	Railways	0	0	0	1	0	1
264	Plastic & Nonmetallic Article Shaping or Treating: Processes	0	0	1	0	0	1
290	Prime-Mover Dynamo Plants	0	0	0	1	0	1
415	Rotary Kinetic Fluid Motors or Pumps	0	0	0	0	1	1
427	Coating Processes	0	0	0	0	1	1
701	DP: Vehicles, Navigation, and Relative Location (Data Processing)	0	0	0	0	1	1
<b>Totals</b>		<b>8</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>6</b>	<b>20</b>

### Bothell

#### Biomedical Manufacturing

Class	Class Title	2006	2007	2008	2009	2010	Total
623	Prosthesis (i.e., Artificial Body Members), Parts Thereof, or Aids and Accessories Therefor	12	8	5	5	14	24
378	X-Ray or Gamma Ray Systems or Devices	2	0	2	3	4	9
351	Optics: Eye Examining, Vision Testing and Correcting	0	0	4	2	4	10
430	Radiation Imagery Chemistry: Process, Composition, or Product Thereof	0	3	0	0	1	1
<b>Totals</b>		<b>14</b>	<b>11</b>	<b>11</b>	<b>10</b>	<b>23</b>	<b>44</b>

### Grays Harbor

#### Sustainable Industries

Class	Class Title	2006	2007	2008	2009	2010	Total
241	Solid Material Comminution or Disintegration	1	0	0	0	1	1
141	Fluent Material Handling, with Receiver or Receiver Coacting Means	0	0	0	1	0	1
<b>Totals</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>

### Kittitas/Ellensburg

#### Renewable Energy Technologies, Particularly Wind and Solar none related

### Pullman

#### Clean Information Technology and Data Center Technologies, Smart Grid Technologies, Smart Farm and Smart Home Technologies

Class	Class Title	2006	2007	2008	2009	2010	Total
361	Electricity: Electrical Systems and Devices	3	5	8	3	3	14
62	Refrigeration	5	3	4	2	3	9
165	Heat Exchange	1	2	0	0	3	3
310	Electrical Generator or Motor Structure	0	1	2	0	2	4
250	Radiant Energy	1	1	1	0	1	2
324	Electricity: Measuring and Testing	1	0	1	2	0	3
323	Electricity: Power Supply or Regulation Systems	0	2	0	1	1	2
336	Inductor Devices	0	1	0	1	0	1

239	Fluid Sprinkling, Spraying, and Diffusing	0	2	1	1	0	2
307	Electrical Transmission or Interconnection Systems	0	0	1	1	0	2
375	Pulse or Digital Communications	0	0	1	1	0	2
700	DP: Generic Control Systems or Specific Applications (Data Processing)	1	0	0	0	1	1
56	Harvesters	0	0	0	0	1	1
174	Electricity: Conductors and Insulators	0	0	0	0	1	1
341	Coded Data Generation or Conversion	0	0	1	0	0	1
374	Thermal Measuring and Testing	0	0	0	0	1	1
438	Semiconductor Device Manufacturing: Process	0	0	0	0	1	1
707	DP: Database and File Management or Data Structures (Data Processing)	0	0	0	1	0	1
715	DP: Presentation Processing of Document, Operator Interface Processing, and Screen Saver Display Processing (Data Processing)	0	0	1	0	0	1
726	Information Security	0	0	0	0	1	1
<b>Totals</b>		<b>12</b>	<b>17</b>	<b>21</b>	<b>13</b>	<b>19</b>	<b>53</b>

### Richland/Tri-Cities

#### Energy Storage, Smart Grid & Other

Class	Class Title	2006	2007	2008	2009	2010	Total
250	Radiant Energy	2	4	5	6	3	14
429	Chemistry: Electrical Current Producing Apparatus, Product, and Process	0	3	2	0	4	6
48	Gas: Heating and Illuminating	0	0	0	2	2	4
219	Electric Heating	0	1	1	0	1	2
376	Induced Nuclear Reactions: Processes, Systems, and Elements	1	0	1	1	0	2
52	Static Structures (e.g., Buildings)	1	0	0	1	0	1
136	Batteries: Thermoelectric and Photoelectric	0	0	0	0	2	2
324	Electricity: Measuring and Testing	1	0	0	1	0	1
208	Mineral Oils: Processes and Products	0	0	0	0	1	1
307	Electrical Transmission or Interconnection Systems	0	0	1	0	0	1
310	Electrical Generator or Motor Structure	0	0	1	0	0	1
<b>Totals</b>		<b>5</b>	<b>8</b>	<b>11</b>	<b>11</b>	<b>13</b>	<b>35</b>

### Seattle/S. Lake Union

#### Global Health

Class	Class Title	2006	2007	2008	2009	2010	Total
424	Drug, Bio-Affecting and Body Treating Compositions (includes Class 514)	54	57	35	38	80	153
435	Chemistry: Molecular Biology and Microbiology	36	27	32	52	50	134
128	Surgery (includes Class 600)	35	29	17	43	51	111
607	Surgery: Light, Thermal, and Electrical Application	25	24	9	13	22	44
623	Prosthesis (i.e., Artificial Body Members), Parts Thereof, or Aids and Accessories Therefor	12	8	5	5	14	24
604	Surgery (Medicators and Receptors)	3	5	3	4	14	21
606	Surgery (instruments)	5	3	4	8	7	19
436	Chemistry: Analytical and Immunological Testing	2	6	6	8	6	20
601	Surgery: Kinesitherapy	1	3	1	1	4	6
433	Dentistry	3	1	0	0	2	2
602	Surgery: Splint, Brace, or Bandage	1	2	0	1	3	4
800	Multicellular Living Organisms and Unmodified Parts Thereof and Related Processes	1	1	2	1	0	3
<b>Totals</b>		<b>178</b>	<b>166</b>	<b>114</b>	<b>174</b>	<b>253</b>	<b>541</b>

**Clallam****Marine and Tidal Energy**

Class	Class Title	2006	2007	2008	2009	2010	Total
342	Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation)	0	0	1	1	0	2
114	Ships	0	0	0	0	1	1
441	Buoys, Rafts, and Aquatic Devices	0	0	1	0	0	1
<b>Totals</b>		<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>4</b>

**Snohomish/Everett****Aerospace**

Class	Class Title	2006	2007	2008	2009	2010	Total
244	Aeronautics and Astronautics	37	37	31	47	38	116
703	DP: Structural Design, Modeling, Simulation, and Emulation (Data Processing)	23	24	23	27	26	76
701	DP: Vehicles, Navigation, and Relative Location (Data Processing)	15	20	18	23	41	82
106	Compositions: Coating or Plastic	0	1	0	1	3	4
44	Fuel and Related Compositions	0	0	1	2	1	4
501	Compositions: Ceramic	0	0	0	1	0	1
<b>Totals</b>		<b>75</b>	<b>82</b>	<b>73</b>	<b>101</b>	<b>109</b>	<b>283</b>

**Spokane****Health Care and Energy Research**

Class	Class Title	2006	2007	2008	2009	2010	Total
361	Electricity: Electrical Systems and Devices	2	6	2	5	1	8
604	Surgery (Medicators and Receptors)	0	1	0	2	7	9
429	Chemistry: Electrical Current Producing Apparatus, Product, and Process	4	0	3	0	2	5
435	Chemistry: Molecular Biology and Microbiology	0	1	2	2	0	4
165	Heat Exchange	1	0	1	1	0	2
219	Electric Heating	0	1	1	0	1	2
424	Drug, Bio-Affecting and Body Treating Compositions (includes Class 514)	1	0	0	0	2	2
204	Chemistry: Electrical and Wave Energy	0	0	0	1	1	2
356	Optics: Measuring and Testing	0	0	2	0	0	2
359	Optical: Systems and Elements	0	0	0	1	1	2
800	Multicellular Living Organisms and Unmodified Parts Thereof and Related Processes	0	0	2	0	0	2
48	Gas: Heating and Illuminating	0	0	1	0	0	1
200	Electricity: Circuit Makers and Breakers	0	0	0	1	0	1
307	Electrical Transmission or Interconnection Systems	0	0	0	0	1	1
310	Electrical Generator or Motor Structure	0	0	0	0	1	1
318	Electricity: Motive Power Systems	0	0	1	0	0	1
320	Electricity: Battery or Capacitor Charging or Discharging	0	0	0	0	1	1
323	Electricity: Power Supply or Regulation Systems	0	0	0	1	0	1
432	Heating	0	0	1	0	0	1
433	Dentistry	0	0	0	0	1	1
606	Surgery (instruments)	0	0	0	1	0	1
<b>Totals</b>		<b>8</b>	<b>9</b>	<b>16</b>	<b>15</b>	<b>19</b>	<b>50</b>

**Walla Walla  
Viticulture and Water Management**

<b>Class</b>	<b>Class Title</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Total</b>
239	Fluid Sprinkling, Spraying, and Diffusing	7	4	0	5	3	8
137	Fluid Handling	1	2	2	0	0	2
99	Foods and Beverages: Apparatus	0	0	0	1	0	1
210	Liquid Purification or Separation	0	0	0	1	0	1
<b>Totals</b>		<b>8</b>	<b>6</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>12</b>

Source: US Patent and Trademark Office

## Appendix 4: IPZ-Defined Metrics

IPZ-Defined Metrics				
<b>Auburn (2011)</b>	<b>Goals</b>	develop manufacturing clusters	maximize supply chain efficiencies	convert warehouse space to tech clusters
	<b>Value added</b>	cross-bred innovation	kept down cost	concentration of effort
	<b>Metrics</b>	jobs	increase average wages	space converted to manufacturing
<b>Bellingham (2007)</b>	<b>Goals</b>	help partnership between educational private sector	attract industry development to waterfront	target businesses using high tech to help improve processes
	<b>Value added</b>	relationship with university	infrastructure in place for opportunities	
	<b>Metrics</b>	infrastructure development plan	progress in waterfront development	funding for solar initiatives
<b>Bothell (2007)</b>	<b>Goals</b>	networking and resource sharing	formal training sessions	professional development
	<b>Value added</b>	partnerships	branding	firm recruitment
	<b>Metrics</b>	visibility	companies participating in events	CEOs engaged in the program
<b>Clallam (2007)</b>	<b>Goals</b>	develop resources and infrastructure	industrial recruitment and workforce development	establish cost-efficient ocean energy in region
	<b>Value added</b>	branding	partnerships	
	<b>Metrics</b>	securing administrative funding	IPZ annexation into Sequim	infrastructure development
<b>Ellensburg (2009)</b>	<b>Goals</b>	develop marketable intellectual and physical property	provide industry relevant learning to students	professional job growth and economic diversification
	<b>Value added</b>	operational funding	partnerships	channel for attracting business
	<b>Metrics</b>	firms in cluster	connect operators with services providers	help startups
<b>Grays Harbor (2007)</b>	<b>Goals</b>	networking and resource sharing	formal training sessions	professional development
	<b>Value added</b>	research	infrastructure	branding
	<b>Metrics</b>	occupancy	partnerships	economic growth
<b>King County (2011)</b>	<b>Goals</b>	branding as center for financial services	develop and support innovative leadership	grow the industry
	<b>Value added</b>	appreciation of industry	industry collaboration	brings a service industry into IPZ program
	<b>Metrics</b>	industry revenue	jobs	perception as leader in field
<b>Pullman (2007)</b>	<b>Goals</b>	increase occupancy of IPZ	help commercialize WSU technologies	1-3 new startups annually

	<b>Value added</b>	foster entrepreneurships	assist with commercialization	
	<b>Metrics</b>	living wage jobs	number of research professionals collaborating	firms working to commercialize products
<b>Redmond (2011)</b>	<b>Goals</b>	connect entrepreneurs to potential funding	leverage area's expertise to identify start-ups & incubator spaces	increase the industry locally
	<b>Value added</b>	partnerships	capital for infrastructure	branding
	<b>Metrics</b>	jobs	activities in the IPZ	quantity and quality of new people involved
<b>Richland /Tri-Cities (2007)</b>	<b>Goals</b>	jobs and tax base	sustainable technologies	economic diversity and family wage jobs
	<b>Value added</b>	attract investors	lab space (infrastructure)	
	<b>Metrics</b>	investments	implementation of shared vision	jobs
<b>Seattle (2007)</b>	<b>Goals</b>	raise public awareness about global health and IPZ specifically	increase education and mentoring activities	increase commercial opportunities
	<b>Value added</b>	branding	partnerships/ networking	
	<b>Metrics</b>	jobs	partnerships and opportunities	number of firms in cluster
<b>Snohomish (2007)</b>	<b>Goals</b>	increase marketing of IPZ	develop workforce	maintain structure and process for zone
	<b>Value added</b>	more data for decision making	partnership with education	supports industry growth
	<b>Metrics</b>	jobs	people trained	
<b>Spokane (2007)</b>	<b>Goals</b>	innovations in health care	improve or build more efficient buildings	jobs in health care and clean tech
	<b>Value added</b>	branding		
	<b>Metrics</b>	jobs	investment	entrepreneurial startups
<b>Tacoma (2011)</b>	<b>Goals</b>	marketing conferences to enhance profile	retain/expand existing clean water cluster	
	<b>Value added</b>	branding	funding	
	<b>Metrics</b>	investment	jobs	perception as leader in field
<b>Walla Walla (2007)</b>	<b>Goals</b>	encourage infrastructure	encourage investment in talent	encourage entrepreneurship
	<b>Value added</b>	lab space	broadband	focus and concentration
	<b>Metrics</b>	support for infrastructure and partnerships	emphasis and enthusiasm for innovation	goals similar to those achieved at Walla Walla CC

## Appendix 5: IPZ Profiles

### Auburn (2011 Designation; Urban, Low Industry Maturity)

**IPZ Name:** Urban Center for Innovative Partnerships

**Zone Administrator:** Doug Lein

**Area of focus:** Sustainable Industrial Redevelopment

**Partners:** City of Auburn, Washington State University, Green River Community College, Auburn Area Chamber of Commerce, Auburn School District, enterpriseSeattle, King County, Forest Concepts Inc., Century Link Inc., Parametrix Engineering Inc., and Old Castle Pre Cast Inc.

**Regional Assets:** Established manufacturing cluster and the largest warehouse distribution space on the west coast of the United States

**Summary:** Having been approved as an IPZ in March of 2012, the IPZ has only now reached the point of implementation. They are in the process of surveying companies within the four clusters that have been targeted (ecosystems, aeronautics, construction technologies, and green technologies). Within the boundary of the IPZ multiple biofuel companies are involved in a grant for developing feedstock for Boeing. Biofuel byproducts have been developed by another company for storm water management and water quality.

**Engagement:** Interaction between the IPZ, private partners, and WSU is leading toward development of a four-year degree program in telecommunication science at Green River Community College. The IPZ has also proposed an advanced skills and tech center with Green River located at the airport, to train for aviation and aeronautics apprenticeships.

**Value-added by IPZ:**

- The IPZ has allowed for cross-breed innovation, leading to technology and research into new opportunities for commercialization.
- It has allowed participating firms to keep the cost of overhead down.
- It allows for a sustained concentration of efforts.

**Challenges:** The IPZ had a WSU researcher leave. This person's replacement came in but left after six months. This has created a need for an active researcher in residence. Also, the IPZ reports being handicapped in the Community Economic Revitalization Board application process because there was no money specifically earmarked for IPZs.

## **Bellingham** (2007 Designation; Rural, Medium Industry Maturity)

**IPZ Name:** Waterfront Innovation Zone

**Zone Administrator:** Dodd Snodgrass

**Area of focus:** Industrial design, advanced materials applications and energy technologies focused on clean transportation, and training for industries of the future

**Partners:** Port of Bellingham, Western Washington University, Bellingham Technical College, Alpha Technologies, Inc., the Technology Alliance Group, the Northwest Innovation Resource Center, the Northwest Economic Council, the Northwest Workforce Council, and the Bellingham Innovation Group

**Regional Assets:** The waterfront, the Technology Development Center, Western Washington University and proximity to Canada

**Summary of changes since 2010:** The IPZ started out as a brownfield, which in the aftermath of the recession and housing bubble has made the last several years challenging. Despite that, they are moving forward with a site remediation plan and have secured a real estate agreement for a construction firm to do work at the shipping terminal on an oil containment vessel.

They also now have the tenant capacity for light industrial companies, are looking to launch a solar array project with Western Washington University, and are temporarily housing a University fisheries project.

**Engagement:** One problem has been changes in leadership at the university and community college. Initially they were strong partners, but the turnover has slowed progress. Engagement with Bellingham Technical College has been good as they are more nimble and place a priority on placing students with private industry. The IPZ has also worked with Whatcom Community College, Northwest Indian College, and Trinity Western in Langley, British Columbia. Alpha Energy is a partner and tenant, but engagement with other industry partners has been less than anticipated.

**Value-added by IPZ:**

- Relationship with Western Washington University is strengthened by the IPZ.
- Having the Technology Development Center in place, if right opportunity comes along, could be a great asset.

**Challenges:** Unlike some other IPZs, there was no established industry cluster to start with. This has necessitated the extra step of growing industries from the ground up. Also, because the IPZ has established research infrastructure, the Community Economic Revitalization Board grant was not an option.



## **Bothell** (2007 Designation; Urban, High Industry Maturity)

**IPZ Name:** Bothell Biomedical Manufacturing IPZ

**Zone Administrator:** Terrie Battuello

**Area of focus:** Biomedical manufacturing

**Partners:** City of Bothell, Economic Development Council of Snohomish County, enterpriseSeattle, Phillips Healthcare, University of Washington-Bothell, Edmonds Community College, Lake Washington Institute of Technology, and Cascadia College

**Regional Assets:** Regional biomedical cluster, Washington Biotechnology and Biomedical Association, and University of Washington-Bothell

**Summary of changes since 2010:** The IPZ received funding to start an incubator, and recently they have been able to take on more private-sector partners. Progressively the visibility of the IPZ has risen, in part due to the IPZ being a host organizer for the annual gathering for the medical device community. They have submitted recruitment packages for various companies. While there are no direct successes, they have seen expansion of companies and ribbon cutting ceremonies.

**Engagement:** University of Washington-Bothell, Edmonds Community College, and Cascadia College are current education partners. Lake Washington Institute of Technology is a site for an incubator and will also conduct a freight mobility study designed to better understand how to remedy the existing freight bottleneck. Over the last two years, the IPZ has been holding CEO lunches, where they listen to what's going to help shape programs that will support them. This listen first approach has strengthened relationships. However, this engagement has been limited by available resources.

**Value-added by IPZ:**

- The IPZ is a host organizer for the annual gathering for the medical device community.
- Because of IPZ efforts, Washington Biotechnology and Biomedical Association put a stronger emphasis on biomedical device firms.
- The University of Washington Center for Commercialization (C4C) came to the IPZ with the idea for an incubator (both physical and virtual), which is now in the process of being set up.
- The IPZ has brought recognition that the life sciences and pharmacy industries exist in Bothell and aren't exclusive to Seattle.
- Buyouts with an ensuing relocation are common in the pharmacy field. Because of this the IPZ's work in replacing relocated firms is critical to the local economy.

**Challenges:** Although University of Washington resources are significant, the IPZ's experience has been better working with technical and community colleges due to fewer competing interests and a shared culture of innovation and urgency.

The IPZ consists of four sprawling business parks, with little social infrastructure for networking and collaboration. The IPZ has tried to fill this lack of social infrastructure by sponsoring events, but the state can also help by raising the IPZ's visibility.

## **Clallam** (2007 Designated; Rural, Low Industry Maturity)

**IPZ Name:** North Olympic Peninsula IPZ

**Zone Administrator:** Linda Rotmark

**Area of focus:** Marine and tidal energy

**Partners:** Clallam County Economic Development Council, Pacific Northwest National Laboratories (PNNL), Peninsula College, Battelle Marine Laboratories (PNNL), city of Sequim, Port of Port Angeles, Clallam County, Jefferson County, and Olympic Finance Development Authority

**Regional Assets:** PNNL, Peninsula College, and proximity to marine resource

**Summary of changes since 2010:** The IPZ's 2011 redesignation application retained the previous algae focus and enlarged its scope within the context of renewable energy opportunities on the Western Washington coastlines (wind, wave, and tidal).

In addition, Peninsula College, through the Department of Labor's Air Washington Grant (\$700,000) has developed curriculum that initially benefits the aerospace industry but can be adapted to marine renewable energy manufacturing in the near future.

An agreement regarding annexation of the Sequim Marine Sciences Laboratory has not yet been achieved, although the issue is under active discussion between PNNL and the city of Sequim. However, growth and development of the IPZ in the near term is not dependent on early completion of the annexation process.

**Engagement:** Peninsula College has been working to develop curriculum for the emerging renewable energy workforce requirements and has received a \$700,000 grant toward that end. Since 2011, the IPZ has had outreach and interaction with composite manufacturers and developers.

**Value-added by IPZ:**

- Promotion of marine renewable energy through presentations and roundtables.
- IPZ partners are instrumental in developing the "Composites Corridor."

**Challenges:** The need for IPZ staffing to support goals, getting the Battelle campus within Sequim city limits.

## **Ellensburg** (2009 Designation; Rural, Medium Industry Maturity)

**IPZ Name:** Central Washington Resource Energy Collaborative

**Zone Administrator:** Tony Aronica

**Area of focus:** Renewable energy technologies, particularly wind and solar

**Partners:** Kittitas County Chamber of Commerce-EDC (merger of the former Economic Development Group of Kittitas and the chamber), Kittitas County, Central Washington University (CWU), Puget Sound Energy (PSE), enExco Development Corporation, and Central Washington University (Renewable Sustainable Technology Degree Program)

**Regional Assets:** Considerable and reliable wind and solar resources necessary for the production of green energy and the presence of a high voltage transmission corridor

**Summary of changes since 2010:** The IPZ has moved to operate as a joint public-private partnership including the Economic Development Group, the county, CWU, PSE, and enXco. All of the partners have pledged monetary contributions, amounting to \$1.5 million in operating pledges in addition to \$500,000 cash or in-kind contributions over the past four years. The county is in the process of buying a building to use as a technology incubator.

The IPZ has supported a trade association that has held annual conferences and semi-annual meetings. Additionally it has worked with the local workforce development council on training related to rescue and emergency responders for wind turbines.

**Engagement:** The primary educational engagement to date has entailed handing off startups to the research foundation at CWU. However, the IPZ and university have worked separately toward that end as there is no written agreement. On the industry side, engagement has been very good with the two private-sector partners, but more engagement with the other two wind developers would be ideal. In addition, there are no prominent solar manufacturers engaged.

**Value-added by IPZ:**

- Bringing in operational funding.
- The IPZ acts as an industry sector liaison bringing together utilities, researchers, and the public.
- Only channel for growing/attracting new business.

**Challenges:** Because the IPZ is wind farms, the boundaries are particularly challenging. About one-third of the existing boundary is on the CWU campus, leaving very little land within the IPZ boundaries to develop. This problem is exacerbating by the requirement that Community Economic Revitalization Board grant applications must be within IPZ boundaries.

## **Grays Harbor** (2007 Designation; Rural, Low Industry Maturity)

**IPZ Name:** Grays Harbor IPZ

**Zone Administrator:** Mary Nelson

**Area of focus:** Sustainable industries

**Partners:** Port of Grays Harbor, Grays Harbor Development Authority: Satsop Business Park, Grays Harbor College, Grays Harbor Economic Development Council (EDC), Pacific Mountain Workforce Development Council, Regional Education and Training Center, Imperium Renewables, and Paneltech International

**Regional Assets:** The IPZ includes two large industrial parks located at the Port of Grays Harbor in Aberdeen and Hoquiam and the Satsop Business Park in Elma

**Summary of changes since 2010:** The IPZ completed phase one construction of the Coastal Innovation Zone (CIZ), a research and development business incubator facility. The CIZ was completed in 2011, and welcomed its first business incubator tenant, a craft distillery and first time start-up by Sue Watts. In August 2012, the CIZ welcomed Reed Composite Solutions (RCS), a start-up by Ryan Reed, a graduate of the University of Washington Composite Materials Master's program with six years additional research and composites product development experience. RCS has also agreed to manage the CIZ's shared lab located on the second floor of the CIZ.

The IPZ sponsored a research project studying alternative industrial applications for concentrated oxygen extraction liquor (COEL), an effluent of the pulp manufacturing process. The IPZ has been expanded to include the industrial parks at the Port of Grays Harbor in Aberdeen and Hoquiam, and the Satsop Business Park located outside Elma.

**Engagement:** The IPZ has had a strong relationship with Grays Harbor College, which in turn is willing to be a catalyst within the WSU system. There are three active education and work force development partners in the consortium. Engagement with private industry is a key strength of the IPZ, which has three economic development partners and two globally competitive private industry partners. Private industry partners are leaders in the region's advanced manufacturing and bioenergy clusters. Two of the economic development partners manage large industrial parks, so are fully engaged with private industry park residents as well as through recruitment efforts.

### **Value-added by IPZ:**

- The ability to support research through a shared R&D lab.
- The IPZ renovated a former distribution and storage building to become the Coastal Innovation Zone, which is a research and business incubator.
- The IPZ partnership hosts strategic entrepreneurship training and business networking events to promote a culture of industrial collaboration, research, sustainability and growth.

**Challenges:** The IPZ lacks local resources in both time and funding to fully execute its business plan. Also as a rural IPZ, they have found it difficult to recruit a nonprofit or university research organization to establish a facility location within the IPZ geographical boundaries.

## **King County** (2011 Designation; Urban, High Industry Maturity)

**IPZ Name:** King County Financial Services Collaborative

**Zone Administrator:** Ray Moser, King County and Jeff Marcell, enterpriseSeattle

**Area of focus:** Financial services industry

**Partners:** enterpriseSeattle, King County's Associate Development Organization, King County, the Workforce Development Council of Seattle-King County, the University of Washington Michael G. Foster School of Business, and Seattle-Northwest Securities Corporation

**Regional Assets:** Financial infrastructure, e.g., all institutions, information, technologies, rules, and standards that enable financial intermediation, and the Federal Reserve Bank of San Francisco's new facility in Renton

**Summary:** The King County Financial Services Collaborative is a partnership between economic development organizations, educational institutions, and industry representatives to grow the financial services industry in King County as well as the entire state.

The King County Financial Services Collaborative gained its designation in October 2011. This was a culmination of a series of efforts that started with the production of an economic impact analysis intended to better understand the industry and where it is headed. This analysis was presented to industry representatives who requested an industry growth plan. Subsequently the group was invited to and they successfully applied for IPZ designation.

Since receiving designation, the IPZ has held and completed four separate task forces, from which action items and recommendations were developed. Action items have been assigned, but the limited amount of resources available has constrained progress to date.

**Engagement:** Collaboration with both education and private sectors has been very high. The dean of the Foster School of Business led the task forces, and they have had talks with the university about recruiting top tier researchers in the field of financial services. Other task forces were led by representatives from Symetra Financial, Seattle NW Securities, and Russell Investments. "Industry has led the charge the whole way."

### **Value-added by IPZ:**

- As a result of the IPZ's work, the community has a better appreciation of how a healthy financial services system feeds the rest of economy.
- Cultivated collaboration within local financial services sector.
- Only service-focused IPZ that has had a statewide influence.

**Challenges:** A big challenge moving forward is the record keeping burden. At some point, the burden of reporting can outweigh the IPZ designation benefit, which for this IPZ at this point is small. Interviewees emphasize importance of recognizing that IPZs are locally – not state driven.

## **Pullman** (2007 Designation: Rural, Low Industry Maturity)

**IPZ Name:** Pullman IPZ

**Zone Administrator:** Joe Poire (Port of Whitman-IPZ designee)

**Area of focus:** Clean information technology and data center technologies, and Smart Grid, Smart Farm, and Smart Home technologies

**Partners:** Port of Whitman, SprayCool Corporation, Green Information Technology Alliance (GITA), Decagon Devices, and Washington State University

**Regional Assets:** Clean Technology Center of Excellence, Port of Whitman County's Industrial Park, and the Washington State University Research and Technology Park

**Summary of changes since 2010:** After a fast start due to having received a significant amount of money and strong university collaboration, things slowed down quite a bit. The dried up funding and reduced educational collaboration coupled with the recession set the program back to the extent that it is only now beginning to recover.

**Engagement:** As long as there was funding to act as an incentive, the IPZ has been able to attract researchers. The IPZ has laboratory space and solar panels, but even with that researchers need financial incentive to participate. Without that engagement has been subpar. The lack of a more formalized relationship with a four-year institution has also been a limiting factor.

Private-sector engagement has on the whole been strong and much more consistent. The IPZ has played the role of a property manager: developing industrial parks, putting in utilities, recruiting businesses, and helping in commercialization and startup capital.

**Value-added by IPZ:**

- Ability to foster entrepreneurship, encourage technology startups, and assist with commercialization.

**Challenges:** Funding and formalized relationship with university

## **Redmond** (2011 Designation; Urban, Medium Industry Maturity)

**IPZ Name:** Interactive Media and Digital Arts IPZ

**Zone Administrator:** John Marchione, city of Redmond and Jeff Marcell, enterpriseSeattle

**Area of focus:** Interactive media and digital arts

**Partners:** enterpriseSeattle, city of Redmond, University of Washington Bothell, Microsoft, Digipen Institute of Technology, Redmond Economic Development Alliance, and King County

**Regional Assets:** Redmond is home to two of the world's top three gaming platforms. Also has major educational institutions with programs oriented toward digital arts.

**Summary:** After seven years of hosting an economic development program called the Washington Interactive Network (WIN), enterpriseSeattle partnered with the city of Redmond to apply for IPZ designation. Since then WIN has conducted startup workshops, offered women and minority scholarships in game and interactive media, and hosted an annual industry conference. The IPZ is currently working on creating incubator space (including a new mobile innovation hub launched on June 14), refining a rebranding concept, and working on creating an entrepreneur-in-residence program.

**Engagement:** Both education and private industry engagement are very strong. Both entities are also well represented in the WIN Interactive Media Alliance, which assists in curriculum development and creation of internship programs. Students from the Digipen Institute of Technology (both four-year and graduate programs) have been working on projects with the IPZ. Similarly, University of Washington Bothell has been a very active partner and has a Center for Game Science. The executive director of WIN also sits on a number of industry boards, which has allowed for strong industry connections to embrace the breadth of the industry.

**Value-added by IPZ:**

- Bringing together enterpriseSeattle with the city of Redmond to identify common needs and partnering opportunities.
- Capital improvement to create incubator space.
- Branding for the region.
- Business know-how: developers of intellectual property are not necessarily those who know how to run a business, necessitating education and match-making.

**Challenges:** Typical entrepreneurs in this field lack standard business know-how, necessitating educational outreach. In addition, there is strong unfilled demand for internships.

## **Richland/Tri-Cities** (2007 Designation; Rural, Medium Industry Maturity)

**IPZ Name:** Tri-Cities Research District

**Zone Administrator:** Diahann Howard

**Area of focus:** Energy Storage, Smart Grid

**Partners:** Port of Benton, Washington State University-Tri-Cities (WSU-TC), Columbia Basin College, Benton Franklin Workforce Development Council, Pacific Northwest National Laboratories (PNNL), cities of Richland, Kennewick and Pasco, Tri-Cities Regional Chamber of Commerce, TRIDEC (Tri-City Development Council), Three Rivers Tech Alliance, Innovation Center TCRD LLC, YAHS GS LLC, Western Sintering Co. Inc., Science Applications International Corporation, Moravek Biochemicals Inc., IsoRay Medical, Innovatek Inc., Areva NP, Surgical Implant Generation Network, and Energy Northwest

**Regional Assets:** PNNL, WSU-TC, the Port of Benton, Hanford contractors, other federal and state agencies, and approximately 80 Richland businesses

**Summary of changes since 2010:** There has been significant funding received for various capital improvements within the IPZ, mostly from private sources. These include \$52 million for the Innovation Center, \$2.3 million for broadband for the port and the city of Richland, \$5.5 million for WSU's engineering department from an energy company, \$250,000 for a port sidewalk project, \$450,000 for city and port revitalization project, and \$2.2 million for commercial center infrastructure. The IPZ is also in the programmatic stages of a wine center facility, with construction planned for 2013.

**Engagement:** Collaboration has been particularly strong with WSU. The relationship with the university is a high priority for the IPZ, reflected by the nearly weekly meetings to drive forward mutual goals. The IPZ surveys, helps assess needs, and works with potential investors of private industry partners. However, they are still trying to find more ways to collaborate.

**Value-added by IPZ:**

- Acting as magnet for bringing in opportunities and investors.
- By bringing in grants and helping to provide laboratory space, it has attracted a high-wage workforce as well as learning opportunities for students.

**Challenges:** There needs to be incentives (funds or tax credits) for private partners to relocate and for educational partners to participate with the IPZ. A full-time staff person to drive commercialization at the university would be ideal, but there is not currently available funding for this.



## **Seattle** (2007 Designation: Urban, High Industry Maturity)

**IPZ Name:** South Lake Union Global Health IPZ

**Zone Administrator:** Tina Vlasaty

**Area of focus:** Global Health

**Partners:** City of Seattle-Office of Economic Development, University of Washington-PATH, Washington Global Health Alliance, Bill and Melinda Gates Foundation, and Seattle BioMed

**Regional Assets:** The global health industry cluster

**Summary of changes since 2010:** The biggest change for the IPZ has been switching its focus from life sciences to global health. They did receive a grant to do market-opportunity mapping and have had several businesses move into the IPZ.

The biggest recent event was the activities revolving around the 50th anniversary of the Seattle World's Fair. A number of activities involved global health and indirectly related to the work of the IPZ.

**Engagement:** Both University of Washington and Washington State University are very active with the Global Health Alliance (and subsequently the IPZ). Traditionally, engagement with other entities primarily has been with non-profits such as the Gates Foundation. However, this year the IPZ is having more engagement with for-profit firms, such as Cascade Designs (an outdoor equipment manufacturer working on water purification).

**Value-added by IPZ:**

- Being outlined on the map draws companies to the IPZ geography.
- Networking.

**Challenges:** The existing cluster is largely organic and much of the typical IPZ activity is handled by the Washington Global Health Alliance. The biggest challenge has been that most funding is designated for capital – something of relatively little value to an urban IPZ.

## **Snohomish** (2007 Designation; Urban, High Industry Maturity)

**IPZ Name:** Aerospace Convergence Zone

**Zone Administrator:** Mary Jane Brell Vujovic

**Area of focus:** Aerospace

**Partners:** Workforce Development Council of Snohomish County, Future of Flight Aviation Center and Boeing Tours, The Aerospace Futures Alliance of Washington (AFA), Economic Alliance Snohomish County, Snohomish County, the cities of Arlington, Everett and Marysville, K-12 school districts, Edmonds Community College, Everett Community College, Cascadia Community College, Lake Washington Institute of Technology, University of Washington-Bothell, Washington State University, and Western Washington University

**Regional Assets:** The local aerospace industry and the Washington Aerospace Training and Resource Center (WATRC) at Paine Field

**Summary of changes since 2010:** The IPZ has attracted a number of major employers in part due the geographic expansion and the IPZ's redesignation. The Washington Aerospace Training and Research Center has expanded rapidly both in terms of students and physical infrastructure. Washington State University has established an engineering program with initial academic coursework at the branch campus that is equivalent to what exists in Vancouver and the Tri-Cities.

A private investor is expanding the infrastructure at Paine Field; a 60,000-square-foot building to work on airplane interiors is nearing completion. Temporary agencies have been working with the local workforce agencies and organizations to fill positions in greatest demand.

**Engagement:** The IPZ operates under the Snohomish County Blueprint partnership that includes all levels of education, cities, port, and AFA. All these groups have been working closely to make sure education meets industry needs. The Economic Alliance has been out front in maintaining those relationships with industry. There are currently industry experts on staff and the region probably wouldn't have the 787 if it wasn't for the Economic Alliance.

**Value-added by IPZ:**

- It allows for collection of more data and information, particularly on educational needs, to inform and educate legislators.
- Relationships with educational partners have been critical in determining workforce needs.
- It contributes to retaining and growing the aerospace industry.

**Challenges:** Manpower is a constraint: "There are just a handful of us yet there are 160 aerospace companies, so we don't have resources. This limitation forces us to focus on bigger companies or those deemed most critical. Also with more people we could do more to prepare a STEM-oriented aerospace workforce."

## **Spokane** (2007 Designation; Urban, Medium Industry Maturity)

**IPZ Name:** University District IPZ

**Zone Administrator:** Robin Toth

**Area of focus:** Health Care and Energy Research

**Partners:** Greater Spokane Incorporated, Avista Corp., city of Spokane, Downtown Spokane Partnership, Washington State University-Spokane, Institute for Systems Medicine, Innovate Washington (formerly Spokane Intercollegiate Research and Technology Institute), Matrical Bioscience, and McKinstry

**Regional Assets:** The Spokane University District (Riverpoint campus) and local health care industry

**Summary of changes since 2010:** A 100-year-old former rail facility, now called the McKinstry Innovation Center, has been re-finished and is now offering wet lab and research space within the IPZ. The IPZ has also received funding (\$37 million) to complete construction of an academic health science center. Eventually the center will house medical, dental, and eventually pharmacy students in an effort to meet the rising shortage of medical professionals.

The IPZ is currently working with the Health Science and Services Authority, which recently awarded \$1.8 million to Washington State University. The grants will help the university hire two nationally renowned health science researchers and fund needed lab equipment. The IPZ is also working to increase STEM K-12 education on the Riverpoint campus, primarily in bio-science.

**Engagement:** The IPZ is “bound-at-the-hip” with its five educational partners (Washington State University, Eastern Washington University, Gonzaga University, the community colleges of Spokane, and Whitworth University) and the chancellors all sit on the IPZ board. Meeting with these leaders have led to ideas such as the development of STEM education on the campus. Engagement with private industry has been strong as well. Spokane is a regional hub for health services, accounting for about 25 percent of the local economic base. The IPZ meets with industry leaders to discuss and work on solutions to policy, growth, or workforce issues.

**Value-added by IPZ:**

- The IPZ helps raise the profile of the industry and activities in the eastside of the state.
- Having the umbrella of innovation sets the IPZ apart.

**Challenges:** Being able to institutionalize the IPZ. The area is currently known as the “U” district but there is little awareness of the IPZ itself. They also need monetary or other incentives to keep growing.

## **Tacoma** (2011 Designation; Urban, Low Industry Maturity)

**IPZ Name:** Urban Clean Water Technology Zone

**Zone Administrator:** Martha Anderson

**Area of focus:** Clean Water Technology

**Partners:** City of Tacoma, University of Washington-Tacoma, Port of Tacoma, Economic Development Board for Tacoma-Pierce County (EDC), Tacoma Community College, Institute for Environmental Research and Education, and Parametrix

**Regional Assets:** University of Washington-Tacoma (UWT), Washington State University-Puyallup (WSU-Puyallup), Port of Tacoma, and Center for Urban Waters

**Summary:** The EDC has hired a recruiter and a public relations firm. The recruiter has made progress in attracting new firms to the IPZ, having identified 507 clean water technology firms, and attending conferences and trade shows nationally. The public relations firm has increased the visibility about the IPZ and activities within the zone. UWT and WSU-Puyallup collectively received \$3.6 million in funding from the Legislature for laboratories and equipment.

**Engagement:** With the capital funding received from the Legislature in 2011, UWT is constructing and equipping the Clean Water Innovation Development and Technology Transfer Laboratory on its campus. Existing space at UWT will be converted from offices and computer space to engineering laboratories with adjacent offices and computer resources.

WSU-Puyallup has expanded the types of research that can be done. At the WSU-Puyallup Salmon Toxicology Laboratory, scientists from the National Oceanic and Atmospheric Administration-Seattle, U.S. Fish and Wildlife, and WSU have been evaluating the effects of common mixtures of pollutants on salmon health.

### **Value-added by IPZ:**

- Although the IPZ didn't pay for the recruiter, it did focus the recruiter's efforts on bringing firms into the IPZ.
- The funding for labs and equipment at UWT and WSU-Puyallup would not have happened without the IPZ.
- The IPZ partnership brought in Tacoma Community College, which is designing programs to meet workforce needs.
- The IPZ brings recognition to the fact that water is a comparative advantage for the Tacoma region.
- Designation gives credibility and enables them to gear up and bring companies (shows state support).
- Had some impact at margin: money for equipment, recruitment pipeline, companies recruited. It has helped in building a foundation.

**Challenges:** They all have regular jobs, which limit what they can accomplish for the IPZ. Staffing to manage the IPZ would allow for more engagement.

## **Walla Walla** (2007 Designated; Rural, High Industry Maturity)

**IPZ Name:** Walla Walla Valley IPZ

**Zone Administrator:** Tim McCarty

**Area of focus:** Viticulture and water management

**Partners:** City of Walla Walla, Walla Walla Community College, Confederate Tribes of the Umatilla Indian Reservation, ETS Laboratories, Port of Walla Walla, Walla Walla County Commission, Walla Walla Valley Wine Alliance, Nelson Irrigation Corporation, Walla Walla Watershed Alliance, and Walla Walla Watershed Partnership

**Regional Assets:** The William A. Grant Water and Environmental Center, the Walla Walla Community College Center for Enology and Viticulture (Wine Center), and the local wine industry

**Summary of changes since 2010:** The redesignation of the Walla Walla IPZ expanded the boundaries to include all of Walla Walla County as well as Columbia County and it now embraces nearly all of the working economy of the Walla Walla Valley. The IPZ also completed the build-out of fiber optic cable within the initial IPZ area, which includes the Port of Walla Walla Regional Airport Business Park.

The expansion of the Walla Walla Community College Water and Environmental Center was completed. The center provides research, planning, and management of office and lab space for the Confederated Tribes of the Umatilla Indian Reservation's Department of Natural Resources, and other space for potential private-sector partners engaged in water and environmental innovation. Most recently, the Walla Walla Community College received a \$3.67 million grant to support the further development of the college's Wind Turbine Technology program, which provides entry-level training for wind energy and wind turbine generator technicians with emphasis on the emerging wind energy industry and investment in alternative energy training and innovative energy generation.

**Engagement:** Walla Walla Community College has been one of the primary IPZ entities, providing much of the IPZ's leadership. It provides board leadership, educational training for labor markets, and programs focused on incubating private businesses like ETS and Unibest. Pacific National Laboratories and Washington State University have signed on to support these efforts but benefits have yet to be seen. Washington Wine uses the Wine Center as a headquarters. The partnership between the IPZ and industry forms the core of the IPZ.

**Value-added by IPZ:**

- Laboratory space and broadband have attracted and retained tenants.
- The IPZ helps give a focus and concentration of energy and resources to areas that have been identified.

**Challenges:** Economic development is fragmented, so there is a need for someone to step and to create sustainable partnerships. The lack of a full-time staff devoted to this effort has been a challenge.

## **Vancouver** (2007-2011; Not Re-designated)

**IPZ Name:** Discovery Corridor Innovation Zone

**Zone Administrators:** Bart Phillips and Jeanie Ashe

**Original area of focus:** Semiconductor and micro-device design, integrated chip manufacturing and processing, display technology and multimedia.

**Summary of IPZ History:** The Vancouver IPZ started out with the idea of developing a research park on a piece of donated land that was to be Washington State University property. The research park concept was originally developed with partners and then the IPZ idea came along and paralleled their concept. A research park, which is speculative in nature, needs development capital. The Vancouver IPZ applied for capital funding initially, but failed to gain it. At the same time, potential private capital was disappearing in the aftermath of the housing collapse. Given this lack of development capital, the IPZ was unable to move forward.

Later, with a turnover in IPZ leadership, the IPZ applied for redesignation. There was a relatively short time available to turn around the application, but a cluster and a potential private-sector partner was identified. Nonetheless, the IPZ was denied redesignation, primarily based on questions regarding the feasibility of the cluster.

**Challenges:** One challenge is that without funding, the IPZ had very little to offer. Another is that generally accepted clusters tend to be Puget Sound-centric and may not fit well in other regions such as Southwest Washington. Lastly, there should be recognition that these programs are designed for the long-run, necessitating a higher degree of patience.

## **Appendix 6: Recommendations from the State of Washington Economic Development Commission**

November 28, 2012

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

Every two years, the Washington State Department of Commerce (“Commerce”) is required to review progress in the Innovation Partnership Zone program and prepare a report to the legislature on its findings (RCW 43.330.270). The legislation also requires the Washington Economic Development Commission (WEDC) to review the draft recommendations with respect to alignment with the comprehensive economic development plan. On behalf of the Washington Economic Development Commission (WEDC) I am pleased to transmit our comments on the report: ***Innovation Partnership Zones 2012 Report: Toward a More Data-Driven Assessment.***

## **Background**

The WEDC plan is to *make Washington the most attractive, creative and fertile investment environment for innovation in the world.*<sup>7</sup> Innovation is the new pathway to building prosperity and competitive advantage. The WEDC supports public policies that energize the environment for innovation and strengthen regional innovation ecosystems. The IPZ program represents an effort to promote local, grass-roots innovation through collaborative partnerships between businesses, entrepreneurs, workforce training and higher education institutions, and local government and economic development stakeholders.

Innovation Partnership Zones (IPZs) represent a new state economic development model that is decentralized, organic and collaborative. The IPZs model goal is to “turbo-charge” local partnerships for developing human capital, growing new companies, expanding exports and creating jobs. The fifteen IPZs that are currently designated are each unique in innovation focus and governance structure and demonstrate the multiple pathways underway to accelerate economic recovery. The IPZ program is also viewed as a branding strategy with significant value-add and as a way of attracting and retaining investment and jobs in a region.

## **Observations on the Report**

We concur with the 2012 report to put in place over time a rigorous assessment methodology that relies on credible sources of data in order to make meaningful judgments about value generated. Secondly, qualitative information gleaned from cases studies, interviews and surveys are most helpful in realizing a deeper understanding of IPZ collaboration attributes and dynamics as they impact broader performance metrics.

An important finding of the 2012 report is that the current performance data submitted by IPZs is inadequate for conducting a rigorous state level performance assessment. The quantitative analysis then draws on employment data from the Employment Security Department and patent data from the US Patent and Trademark Office as comparable indicators. As presented the analysis shows for eight

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<sup>7</sup> Washington Economic Development Commission, “Building a World-Class Innovation Ecosystem,” November 2012. Draft report viewable at: <http://wedc.wa.gov/Download%20files/2012StrategicPlanDraft.pdf>.



IPZs in the data set that total employment grew at above average rates except for Bellingham and Spokane whose employment moved in conjunction with overall statewide employment trends. With respect to patents as a measure of innovativeness the overall trend has been significantly positive. Within IPZ geographies in the data set a total of 255 patents were awarded in 2008. This number rose to 342 in 2009 and to 447 in 2010. This growth amounted to increases of 75 percent between 2008 and 2010, well above the state average growth of 50 percent in the same time period.

Given this data, however, a clear causality between the intervention of an IPZ designation on a region and employment and innovation-based outcomes cannot be demonstrated. This suggests that more work needs to be done to define data standards and data collection protocols to better connect the direct contribution of IPZ activity to outcomes. We caution, however, that detailed operational reporting requirements from IPZs for input or process activity can be a significant burden and have the effect of limiting creative options. The focus should be on how IPZs influence outcomes in the region as a whole. We also note that we are still very early in the life span of IPZ and may not be able to see the results of most IPZ activities for several more years. Finally, we make note of an important methodological point--for any IPZ that is designated it is not possible to know or collect definitive evidence on what activities would have happened if not but for the IPZ designation. As desirable and useful such hypothetical evidence would be, it must remain an unrealistic expectation and, at best, an informed speculation in the realm of social and economic science.

Based on the case studies and interviews an important and impactful advantage of an IPZ designation is simply *branding*. The designation provides an additional marketing tool for outreach to potential investors, and signals to external funding sources (e.g., federal government agencies) a more mature organizational structure that can make external dollars go further than regions lacking a similar structure.

In terms of methodology used in the report, we think the approach employed is a thoughtful mix of defensible third-party administrative data collected by ESD and the U.S. Trademark and Patent Office with surveys and more qualitative sources, e.g., case studies. Using confidential firm-level data can offer important insights into program impact and should be explored across many other program-assessments. Reducing the burden on IPZ administrators on collecting data that can be reliably sourced elsewhere is always a desirable approach.

## Going Forward

IPZs are strategies, rather than actual programs. As such, we need to better understand where IPZs have meaningfully changed the trajectory of regional economy, and what lessons can be taken and scaled across the state to support innovation-based economic development. Washington needs to reassess how we define innovation, how we observe it, and what innovations are an outcome of the IPZ. The WEDC strongly believes that innovation is a grass-roots activity, but we also recognize that early stage research and commercialization cannot occur without significant investments.

**Effective coordination of public resources.** The IPZs are a mechanism to strategically coordinate the disconnected initiatives along the Federal, state, local vertical axis as well as horizontally. Programs in the areas of workforce development, R&D, investment, technology commercialization, entrepreneurship, exports and infrastructure can all be leveraged by IPZs. Funding leverage and flexibility in application of public resources is emerging as an important component of zone success.

**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);
- Continue to encourage state agencies to provide more flexibility for IPZs in grant and contract programs;
- Encourage Innovate Washington, a new state agency, to expand its engagement and services to IPZs;
- Develop mechanisms to strengthen the leadership skills of each IPZ;
- Incentivize IPZs to collaborate with each other to leverage expertise, assets and technological capabilities.

**Branding Washington’s innovation economy.** 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. 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.

In summary, IPZs are not top-down creations; rather we see them better described as emergent, self-organizing innovation clusters driven bottom-up. Although IPZs are modestly funded with no operational financial support from the state, the designation process has functioned as a catalyst for driving regional innovation. They represent a unique cost-effective collaborative approach aligned with the long term economic growth strategy of the WEDC. As IPZ networks learn over time, we are confident they collectively will emerge as a robust innovation accelerator and job creator.

Respectfully,



Egils Milbergs  
Executive Director

cc: Ms. Mary Trimarco  
Ms. Heidi Hughes  
Mr. Roger Woodworth  
Mr. Stephen VanAusdle