BEST PRACTICES IN FOREIGN DIRECT INVESTMENT
AND EXPORTING BASED ON REGIONAL INDUSTRY CLUSTERS

BOTHELL BIOMEDICAL MANUFACTURING INNOVATION PARTNERSHIP ZONE

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Summary

The Bothell Biomedical Manufacturing Innovation Partnership Zone (Bothell IPZ) uses a networked approach to deliver export assistance and other services to medical device companies. The Bothell IPZ is one of 15 IPZs designated as innovation zones by the State of Washington as part of its strategy to encourage sustainable, innovation-driven regional clusters. The IPZ, through its partners, made available new services to the medical device cluster including an export Web portal and targeted exporting seminars.

The Bothell IPZ’s approach enables it to deliver value to the companies in its cluster. The involvement of private-sector companies in the Bothell IPZ helps it to customize its programs to the particular needs of the medical device industry. The level of communication and cooperation among core partners gives the Bothell IPZ the flexibility to leverage each partner’s resources and capabilities to provide these services.\(^1\)

The ability to identify and serve a particular innovation segment, in this case the medical device segment, is an important feature of this practice. As a result, this practice is especially applicable to locales with well-defined industry clusters. A key lesson of the practice is the need for flexibility in organizing partnerships with industry, government, and universities.

Background

Bothell is a city of 34,000 people in the Seattle-Tacoma-Everett metropolitan statistical area (MSA). In addition to drawing on the assets of the larger MSA, Bothell is home to nearly 4,500 businesses and two major higher educational institutions: Cascadia Community College and the University of Washington at Bothell. The city has a relatively strong economy; its five-year per capita income is $37,096, compared to less than $30,000 for the state as a whole.\(^2\)

The Seattle MSA has long been known for having a robust bioscience cluster. Seattle was ranked fifth in The Milken Institute’s 2005 study of life-science clusters and 11\(^{th}\) in a 2009 update.\(^3\) Washington state has 175 biopharmaceutical companies, 205 medical device companies, and more than 25,000 life-science employees.\(^4\) The state has long been home to a strong life-sciences organization – the Washington Biotechnology and Biomedical Association, which has more than 500 members.\(^5\) Over the years, the increasing size of the membership suggested, however, that there was a need to develop a more differentiated networking capability.

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1 This case study is based on interviews conducted with the chairman of the Bothell IPZ on September 10, 2012.
4 http://www.choosewashington.com/industries/sciences/Pages/default.aspx
5 www.washbio.org
focused on the distinctive requirements of the medical device industry versus that of the biopharmaceutical industry. With the Philips Healthcare headquarters for ultrasound R&D and manufacturing based there, Bothell was a key node for the medical device industry. In 1998, Phillips acquired Advanced Technology Laboratories, which was a Bothell-based spinoff of University of Washington research. This ultrasound R&D formed the basis for several companies including SonoSite Inc. (hand-carried and mountable ultrasound devices), Medicis Technologies Corporation (ultrasound-based noninvasive body sculpting), and EKOS Corporation (ultrasound for thrombosis). In all, more than 100 medical device companies were operating in the Seattle region as of May 2008, including 18 in Bothell.

During this period, the state sought to enhance its innovation capabilities. Particular attention was given to the need for innovative clusters in particular regions of the state. This need for development of sustainable clusters, generated legislation in 2007 to create Innovation Partnership Zones (IPZs). The program called for the Washington State Department of Commerce to designate as IPZs qualifying regions that formed partnerships between academic institutions, businesses in R&D-intensive industries, and workforce training entities. Twelve IPZs were authorized (there are now 15), and half of them received funding from a $5 million capital grant pool. Another $1.5 million was made available for IPZ capital projects in 2009, and 2011 saw the competitive allocation of $250,000 grants to IPZs.

The Bothell Biomedical Manufacturing Innovation Partnership Zone (Bothell IPZ) successfully competed for an IPZ designation in 2008. The IPZ application required an administrator, so Terrie Battuello, Bothell’s assistant city manager and economic development manager, took on this role to coordinate the effort along with her other responsibilities. Other core partners, in addition to the city of Bothell, were Economic Alliance Snohomish County, EnterpriseSeattle, the University of Washington at Bothell, Washington Biotechnology and Biomedical Association, and the state’s Department of Commerce. Major private-industry partners also were involved, including Philips, Medicis, Spiration, and Pathway Medical.

The IPZ functions as a virtual, informal network without hired staff, facilities, or funds from the initial rounds of state cluster grants or membership fees (the IPZ is not a membership organization). In 2011, the IPZ incorporated as part of its business plan to pursue state cluster grants for an incubator and training and conference center – the Washington MedTech Discovery Center. That year, the Bothell IPZ was awarded two $500,000 grants, one to support the establishment of an incubator at Lake Washington Institute of Technology and the other for planning of the Washington MedTech Discovery Center. The initial location of the incubator was designed to leverage the institute’s strong machining facilities and training programs to benefit the design and prototyping needs of medical device companies; however, the incubator will eventually be moved to the MedTech Discovery Center.

The Practice in Operation

The Bothell IPZ is involved in three main activities: (1) outreach, (2) partnerships, and (3) training. Exporting and international business are two of the major needs of medical device companies, which seek to diversify markets and address regulatory situations as part of their business strategy.

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7 SHB 1091, Section 43.330, Chapter 227, Laws of 2007.
Outreach
When established, the Bothell IPZ lacked information about regional companies in the medical device sector, so it initiated a study of such companies. The study found that the broader region housed 108 companies with 5,800 employees, generating the firms nearly $2.5 billion in gross revenue. These companies formed the basis for a database composed of company name, product, website, and address. The database has been used as a distribution list for events, beginning with the annual Biomedical Device Summit. The summit offers networking, information sharing, and product exhibits; more than 200 companies (85 percent from the medical device industry) participated in the June 2010 summit. Also in 2008, the IPZ commissioned a study to address the needs of medical device companies for local machining capabilities to develop and make prototypes of devices. The study identified manufacturing information about relevant equipment and competencies in area machine shops.

Partnerships
Several economic development organizations and higher educational institutions in Washington had programs to assist the medical device industry, but these offerings were not always well-known to the industry and to the other partners. The Bothell IPZ provided a venue for exchanging information about training programs and other offerings. This information sharing enabled the partners to identify gaps in information and assistance. For example, easy-to-access information on exporting for medical device firms was lacking. The University of Washington Center for Commercialization partnered with the Bothell IPZ to create a Web portal for new-to-export medical technology companies. Other partners included the Washington Global Health Alliance, Institute of Translational Health Sciences, South Lake Union Global Health Innovation Partnership Zone, and Washington Biotechnology and Biomedical Association. The Washington Community Economic Revitalization Board (which provides funding to cities, counties, towns, IPZs, and public port districts for infrastructure and technical assistance) awarded a $291,264 grant to Bothell IPZ at the end of 2010 for improving export assistance to medical technology companies, including the creation of the medical technology company export-information portal.

Training
The Bothell IPZ has fostered sharing of information about education and training programs. For example, finding that few training programs on medical device exporting existed, in 2010, the Bothell IPZ co-hosted, with the Washington Department of Commerce, a seminar called “Staying Competitive in the Global Market” that concerned the European Directive 2007/47/EC. The Bothell IPZ co-sponsored the “Go Global Med Tech” seminar and workshop on February 27, 2012, in partnership with the University of Washington Center for Commercialization, Washington Biotechnology and Biomedical Association, and the Washington Global Health Alliance. The event’s expert speakers presented information about and examples of databases and resources, foreign market selection, partner selection, risk assessment, logistics, trade finance, and regulatory issues.

Results to Date
Washington’s life-science industry accounts for $1.4 billion of the state’s exports. These exporting dollars cannot be directly tied to the Bothell IPZ’s programs, but the exporting figure is indicative of the effectiveness of state efforts, including those of Bothell IPZ, to generate life-science exports.

The Web portal for medical technology companies, overseen by the University of Washington Center for Commercialization, went live on July 2012. A broad range of information about exporting is presented in the portal (http://www.lifesciencestartup.com/wiki/index.php?title=Exporting):

- A six-step guide to exporting
- An exporting-readiness questionnaire
- Links to local and national export assistance resources
- An exporting check list
- Case studies explaining how to do a market assessment, gather local regulatory and business license requirements, use financing resources, obtain a European Union CE Mark, and deal with international shipping and logistics.

The 2012 “Go Global Med Tech” seminar and workshop reflected interest in exporting among statewide medical technology companies. The chancellor of the University of Washington at Bothell, attuned to offerings through the Bothell IPZ, developed an additional export training program for medical device companies, “Navigating the International Highways and Byways of Medical Technology.” The program’s first seminar in March 2012 addressed the regulatory environments of four countries and presented information on clinical testing, device licensing, and advertising in these countries.

One of the Bothell IPZ’s key private-sector partners, EKOS Corporation, received European CE Mark approval in 2011 for its EkoSonic Endovascular System’s use to treat pulmonary embolism. Although the company previously had received U.S. Food and Drug Administration and CE Mark approval for other uses of the device, this most recent European CE Mark approval reflected the demand for exporting among medical device companies in the region.

Lessons Learned

The Bothell IPZ represents a networked approach to export assistance embedded in an existing cluster development strategy. As such, it differs from traditional export assistance programs that tend to provide general export information to companies across a broad range of industries. The Bothell IPZ begins from the needs of its medical device cluster and provides customized export information (through the portal) and training programs (such as the “Go Global Med Tech” seminar and workshop).

What make the Bothell IPZ successful are the flexibility and communication among the partners to offer programs. The level of cooperation among these partners is high, and it enables the IPZ to leverage the activities of one partner for the benefit of the state’s medical device industry. No single organization must be responsible for delivering all the assistance.

Industry participation is critically important. The IPZ enjoys the involvement of companies ranging in size from Philips to startups. These companies keep the Bothell IPZ focused on offerings that bring value to the industry.

The State of Washington is known as a gateway to Asia, but this geographic positioning is not a limiting factor. The export-related offerings through the Bothell IPZ are replicable by any city that targets and seeks to serve its local industry cluster(s).

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Milestones

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2007</td>
<td>The state of Washington passes legislation to create Innovation Partnership Zones (IPZs).</td>
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<tr>
<td>2008</td>
<td>The Bothell IPZ is designated as an innovation zone by the Washington Department of Commerce, completes a medical device economic impact study, and convenes first industry summit.</td>
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<td>November 2008</td>
<td>The Bothell IPZ conducts a machine shop survey.</td>
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<td>June 2009</td>
<td>IPZ convenes second industry summit.</td>
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<td>June 2010</td>
<td>The Bothell IPZ co-hosts “Staying Competitive in the Global Market” about the European directive 2007/47/EC. The Third Annual Biomedical Device Summit is held.</td>
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<tr>
<td>Late 2010</td>
<td>The Washington Community Economic Revitalization Board awards a grant to the University of Washington Center for Commercialization to develop a medical device export information Web portal. The Bothell IPZ receives a state grant to fund a business incubator.</td>
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<tr>
<td>Early 2011</td>
<td>EKOS Corporation receives European CE Mark approval for its EkoSonic Endovascular System’s use to treat pulmonary embolism.</td>
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<td>2011</td>
<td>The Bothell IPZ incorporates. IPZ convenes fourth industry summit.</td>
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<td>2012</td>
<td>The “Go Global Med Tech” seminar and workshop are offered in February; the “Navigating the International Highways and Byways of Medical Technology” seminar is offered in March. The IPZ receives a grant to plan the MedTech Discovery Center. IPZ convenes fifth industry summit.</td>
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References


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