

PDC

PORTLAND DEVELOPMENT COMMISSION

DATE: October 14, 2009

TO: Board of Commissioners

FROM: Bruce A. Warner, Executive Director

SUBJECT: Report Number 09-120
PDC's Business & Industry Division: Introduction to the Cluster Framework and a Progress Update

EXECUTIVE SUMMARY

BOARD ACTION REQUESTED

None — information only.

SUMMARY

The Portland Development Commission's (PDC's) 2008 internal reorganization that formed the Urban Development Department included the creation of a new Business & Industry Division. That action, along with the approval of Portland's Economic Development Strategy in July 2009, positions PDC well for a renewed focus on job creation and economic growth. The economic development strategy seeks to grow employment in the city by 10,000 net new jobs within five years by focusing its job growth and retention efforts on four clusters: clean technology and sustainable industries, activewear, software, and advanced manufacturing. PDC, as the city's economic development agency, is responsible for deploying the cluster approach to reach job creation goals identified by the strategy.

PDC's approach to working with clusters involves 1) rigorous analysis and data collection in the selection of clusters, 2) preparation of a detailed inventory of firms throughout a cluster supply chain, and 3) convening cluster firms and engaging in a process whereby the firms in the cluster identify challenges and opportunities and prioritize key actions for the cluster to undertake. The cluster approach then requires systematic evaluation to determine whether the cluster actions are meeting objectives of job and industry growth and the cluster is self-sustaining (i.e., driven by the private sector and not public sector intervention alone).

This report provides an update on PDC's efforts to date in prioritizing the work of the Business & Industry Division to match the objectives of the strategy, including workplans for each of the four targeted clusters. This report is the first in a series of briefings on the cluster work of the agency. Subsequent briefings over the next six months will provide detailed updates on PDC's work within each of the target clusters.

BACKGROUND

The Portland Economic Development Strategy is predicated on the implementation of a cluster approach to create jobs. By enhancing the competitive environment for firms in four target clusters - clean technology and sustainable industries, activewear, software, and advanced

manufacturing – the city can foster growth in these promising sectors. In order to effectively pursue a cluster strategy, PDC will tailor its business retention, expansion, and recruitment efforts to meet the needs of cluster firms. The Business & Industry Division has embarked on an effort to organize the majority of its work to meet the needs of the clusters as defined by the clusters themselves. In addition to having three separate teams focused exclusively on cluster work, the Division's business finance team and international development efforts will have cluster growth as a primary objective.

Why Clusters?

According to generally accepted theories about cluster formation, firms physically cluster in the same geographic area because individual firms benefit from being located near companies producing similar goods and services or those that support firms competing to provide the same type of goods and services. Cluster firms have common competitive strengths and needs and their location in the same geographic area provides multiple opportunities:

- Firms can bid for large pieces of work together;
- Cooperation and competition between firms can contribute to specializing production within each firm;
- Competition and inter-firm rivalry drive firms to perform at their most efficient and productive levels;
- Joint purchasing of common raw materials can attract bulk discounts and joint marketing;
- Stronger relationships between people working in cluster firms can lead to the creation of new ideas and new businesses;
- Cluster firms attract talent and provide talented people with a fertile environment to grow in;
- Cluster firms shape education curriculum and can focus the talent within universities, often providing synergistic relationships needed to lead to scientific innovation within institutions; and
- Clusters firms nurture the growth of professional, legal, financial, and other service industries.

By pursuing a cluster development approach to job creation and economic growth, PDC can:

- Understand the ecosystem of relationships that create the foundation for a strong economy;
- Interact with a broad spectrum of industrial firms;
- Target real estate development projects to fit the needs of employers most likely to create jobs in the city;
- Analyze cluster firms' supply chain, which enables PDC to strategically recruit firms to the city and expand local firms;

- Coordinate retention, expansion, international trade strategic, land assembly, and workforce development activities;
- Use in-depth knowledge of particular sectors to fuel catalytic initiatives that move business development efforts beyond traditional assistance and create a cluster wide impact; and
- Selectively invest limited resources in the groups of firms that demonstrate the most promise of growth.

PDC, in consultation with area economists and regional partners and using research performed by ECONorthwest, selected the clusters described below to focus the economic development strategy. These clusters are concentrated beyond national norms and demonstrated growth equal to or beyond industry averages. Their geographic concentration has contributed to the concentration of talent, deepening of local supply chains, and the creation of an internationally recognized Portland brand. A summary of the four clusters follows below:

1. Clean Technology and Sustainable Industries:

- **Electric Vehicles/Batteries:** companies that design or develop electric vehicles, next-generation energy storage technology, and vehicle charging infrastructure;
- **Energy Efficiency:** companies that design or develop technologies to enhance the efficiency of energy generation and distribution and end-user energy consumption, as well as companies that provide services in connection with diagnosing potential energy savings in existing buildings, and implementing energy efficiency measures in existing buildings;
- **Green Development:** companies that design or develop high performing buildings, products, and materials for use in high performing buildings, infrastructure, and systems to support eco-districts;
- **Solar Manufacturing:** companies that manufacture and assemble solar energy products or that are part of the supply chain for manufacturing solar energy products; and
- **Wind Energy:** companies that identify, develop, and exploit wind energy resources, or that manufacture components for initial turbine construction and ongoing turbine maintenance.

2. Activewear: companies that design, manufacture, and/or market sporting and athletic apparel and camping, hiking, and outdoor gear.

3. Software: companies that design, develop, market, and support systems and application software used in personal computers, servers, embedded systems, and mobile devices.

4. Advanced Manufacturing: companies that produce or shape metal into parts or machinery; companies that manufacture equipment for transportation purposes; companies that manufacture computer, electronic and semiconductor components. PDC's focus on manufacturing *excludes* these sectors: wood product manufacturing, food manufacturing, and paper manufacturing.

PROGRESS TO DATE

PDC's Business & Industry Division has made significant progress in advancing the cluster work of the strategy. Staff has been engaged in analysis of the four target clusters, in addition to other industry sectors, for at least two years, and as a result, PDC possesses a wealth of data on the four clusters, including inventories and detailed industry reports on each cluster. In particular, PDC has developed a comprehensive inventory and mapping of the supply chains for the five specialties within the clean tech cluster. This research is a valuable foundation for future work for each of the clusters and allows for meaningful evaluation of the effectiveness of the cluster approach.

PDC is also participating in a successful process of aligning city, regional, and state economic development efforts around the industry clusters identified in the strategy. This alignment will leverage the city's resources and eliminate duplicate efforts, and has already produced a unified action plan for marketing and trade show activities for the clean tech cluster.

In August, Business & Industry staff completed a framework for working with clusters based on best practices throughout the world. This framework will serve as a playbook for PDC's work with all clusters and ensure that interventions in clusters follow a consistent methodology. In addition, the framework serves as a tool for communication both internally and externally so that staff and partners understand how the agency approaches its work with businesses.

The cluster framework divides the work into two phases that include the following steps:

Phase I – Investigate, inventory, and convene clusters to:

- assemble a snapshot of an industry's growth potential;
- map individual firms active in the cluster, their position in the supply chain and the system of relationships that make the cluster competitive in the region;
- develop working partnerships with cluster entrepreneurs, who are important for identifying other key cluster participants as well as cluster opportunities and gaps; and
- convene key cluster members to allow for cluster consensus and leadership to emerge to drive future action.

Phase II – Diagnose, act, and evaluate to:

- synthesize findings from quantitative and qualitative research;
- formulate a strategic plan that cluster entrepreneurs can have ownership of and collectively implement so that government resources are well leveraged;
- implement action plan; and
- determine if actions are meeting objectives and if cluster is capable of self-sustaining intervention.

A step-by-step overview of the framework is attached, as is a mapping of the city's four clusters (eight clusters are mapped because the Clean Tech cluster comprises five distinct specializations).

Strategy Cluster Initiative Progress Update:

Clean Tech and Sustainable Industries		
Phase 1 of Cluster Development: <i>Investigate, inventory and convene clusters</i>	Green Development	PDC is supporting the development of VOIS, a non-profit that will act as a point of collaboration between the private and public sector.
		Convening activities will occur so PDC can consult with cluster entrepreneurs about how to integrate active cluster advocates into the Oregon Sustainability Center project.
	Wind Energy	PDC is collaborating with the State to map the supply chain for the manufacture and installation of wind turbines and systems. By identifying the components to the wind energy supply chain, PDC can identify opportunities for local manufacturers to sell products and services to an expanding marketplace.
		PDC has begun the process of convening a select group of firms in the wind energy supply chain, as well as manufacturers seeking to make the transition from older generation products (See Advanced Manufacturing section below). The convening process will expand to include a broader collection of firms in the wind energy sector.
	Solar	PDC is partnering with the Oregon Solar Energy Industry Association to convene cluster entrepreneurs.
	Energy Efficiency	PDC is scheduled to host a roundtable presentation about Northwest companies should care about improving energy efficiency in China. This is an initial effort to convene this nascent group of entrepreneurs.
		PDC will convene the energy efficiency cluster to determine import substitution strategies generated by the City's new Clean Energy program, and for identifying other strategies to increase demand for energy efficiency products and services.
Electronic Vehicles	PDC has been convening this cluster for the last few months. Next steps include planning for the formation of an industry lead association.	
Phase 2 of Cluster Development: <i>Diagnose, Act and Evaluate</i>	Green Development	PDC is supporting the development of the Oregon Sustainability Center, the first living building in the nation.

Activewear		
<p>Phase 1 of Cluster Development: <i>Investigate, inventory and convene clusters</i></p>	<p>Convene Activewear Cluster through activewear study.</p>	<p>PDC is working in partnership with Greater Greenlight Portland, Portland State University, and the Oregon Business Development Department to convene activewear entrepreneurs.</p> <p>Roundtables with cluster representatives are underway.</p> <p>Deliverables of events include:</p> <ul style="list-style-type: none"> • Activewear industry definition (Oct-Nov 2009); • Online directory of activewear firms throughout the region (Nov 2009); • Supply Chain Map (Nov 2009); • Collateral material(s) (Dec 2009); • White paper articulating challenges, opportunities, benchmarks and competitor locations nationally and internationally. (February 2010); • Genealogy Map (May 2010); • Linked-in Group (Oct 2009); • Intervention Plan if appropriate (March 2010); and • Informal/formal advisory group if appropriate (Dec. 2010).
	<p>Development of a Materials Lab.</p>	<p>PDC is working with a consortium of higher ed partners and design firms to develop a design exchange/materials lab.</p> <p>Roundtables with cluster representatives are underway.</p> <p>Final product will be a business plan for establishing, organizing, funding and structuring a materials lab that meets industry needs, is globally competitive, furthers Portland's position as a global design center and is economically sustainable.</p>

Software		
<p>Phase 1 of Cluster Development: <i>Investigate, inventory and convene clusters</i></p>	<p>PDC is in the process of creating an inventory for this cluster.</p>	<p>Staff meeting with individual companies and entrepreneurs to begin intelligence gathering and education process.</p> <p>Working with industry leaders and organizations, including SAO, NedSpace and OEN, to identify and convene larger conversations, e.g., round tables involving 10-20 companies.</p> <p>The interviews and discussions will produce informal mapping as a first step in understanding the industry and next steps for interactions with the industry.</p>

Advanced Manufacturing		
<p>Phase 1 of Cluster Development: <i>Investigate, inventory and convene clusters</i></p>	<p>PDC is convening entrepreneurs from the wind cluster and the advanced manufacturing cluster to identify opportunities for local advanced manufacturing companies to serve the wind cluster.</p>	<p>PDC formed a Technical Advisory Committee with OBDD, PGE, Pacific Power, OMEP and WSI to discuss strategy to work with industry leaders.</p> <p>PDC is convening the group twice a month.</p> <p>PDC is supporting the creation of an industry led organization: Oregon Wind Energy Coalition.</p> <p>PDC is developing a comprehensive database of Northwest wind companies and possible suppliers (e.g., Wind Turbine Manufacturers, Developers, Owners, etc).</p> <p>PDC is working with a consortium of partners to apply for energy grant from the Dept. of Labor to assist with workforce training and barriers to entry.</p> <p>Currently planning event to convene cluster representatives to map the wind supply chain.</p> <p>A lean manufacturing event is scheduled drive lean manufacturing innovation into firms.</p>

ATTACHMENTS:

- A. Cluster Organizing Framework
- B. Status of Target Clusters

CLUSTER ORGANIZING FRAMEWORK

1. Investigate

- Establish criteria for selection
- Analyze local and national trend data
- Perform initial outreach to verify data conclusions
- Select clusters that have the most potential for growth

2. Inventory

- Define cluster
- Inventory firms, organizations and institutions
- Identify leaders, innovators and trendsetters
- Identify key policies and practices impacting cluster
- Create informal map of cluster ecosystem

3. Convene

- Identify incentive for convening.
- Review & confirm cluster focus/scope, definition and participants
- Identify cluster needs, opportunities and obstacles
- Identify areas of strongest mutual interest

Goal of these steps: identify and engage the cluster. Through engagement, confirm cluster focus/scope.

4. Diagnose

- Synthesize findings into a market analysis
- Select initial strategic interventions (e.g., workforce, trade, marketing, R&D)
- Develop action plan with stakeholders

5. Act

- Establish clear expectations and accountability for partners, including shared resources and staffing.
- Allow for cluster leadership to emerge
- Implement identified interventions

6. Evaluate

- Does the intervention support its intended goals?
- Does the intervention support job growth?
- Is the cluster self supporting?
- Are higher level interventions possible?

Goals of these steps: develop an initiative with cluster participants that they can take the lead in implementing, create growth in the cluster and create the conditions to assist the cluster to find a way to sustain itself.

STATUS OF TARGET CLUSTERS

