Building a World-Class Innovation Ecosystem

Presentation for CAMPS
Kent, Washington
July 26, 2012

Egils Milbergs
Executive Director
Washington Economic Development Commission
Olympia, Washington
www.wedc.wa.gov
egilsm@wedc.wa.gov
360-586-5661
Commission Members

WALLA WALLA COMMUNITY COLLEGE

economic development

WASHINGTON COMMISSION

WASHINGTON STATE LEGISLATURE

Washington State Labor Council, AFL-CIO

Port of Tacoma

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

OncoGenex

Bringing hope to life.

WASHINGTON STATE DEPARTMENT OF AGRICULTURE

ECONOMIC DEVELOPMENT BOARD FOR TACOMA-PIERCE COUNTY

WASHINGTON DEPARTMENT OF COMMERCE

SPEEAA

IFPTE LOCAL 2001

Pacific Northwest National Laboratory

Huron Consulting Group

MODUMETAL
A Ten Year Vision

Make Washington the most attractive, creative and fertile environment for innovation in the world by 2020
The problem we need to solve!

Data source: U.S. Bureau of Labor Statistics
Non-farm Absolute Gains and Losses, Year-over-Year
Washington State, based on three-month-moving-average, not seasonally adjusted, 3 digit NAICS codes

Largest Gains
- Transportation Equipment Manufacturing: 8,497
- Food Services and Drinking Places: 6,033
- Insurance Carriers and Related Activities: 5,449
- General Merchandise Stores: 4,725
- Merchant Wholesalers, Nondurable Goods: 3,292

Largest Losses
- Motor Vehicle and Parts Dealers: -1,367
- Credit Intermediation and Related Activities: -1,380
- Merchant Wholesalers, Durable Goods: -2,212
- Construction of Buildings: -2,327
- Administrative and Support Services: -2,678

The Economic Outlook

Reasons for Optimism

• Strong anchor companies: aerospace, food, information technology, medical, non-profit
• Young, connected, smart people
• Intellectual property hotspot
• Attractive place to live
• No income tax
• Pacific Rim location
• Defense opportunities
• Growing entrepreneurial sector
• Abundant energy sources

Reasons for Pessimism

• Global uncertainty
• Long term unemployed
• Skills mismatch
• Short on engineering talent
• Underperforming schools
• New port competition
• Poor transport infrastructure
• Lagging regions
• Income disparity
• Cost/complexity to start a new business.
# New Economic Development Model

<table>
<thead>
<tr>
<th>Traditional Model</th>
<th>Innovation Driven Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attracting companies</td>
<td>Investing in talent, ideas and infrastructure</td>
</tr>
<tr>
<td>Jobs</td>
<td>Incomes</td>
</tr>
<tr>
<td>Top down development</td>
<td>Bottom-up organic growth</td>
</tr>
<tr>
<td>Closed innovation</td>
<td>Open innovation</td>
</tr>
<tr>
<td>Competing regions</td>
<td>Collaborating regions</td>
</tr>
</tbody>
</table>
What do we need to do?

Progress needed along four dimensions

**Intellect**
Emphasize career transition, access to learning resources and the skills that employers need.

**Investment**
Create innovation ecosystem to foster new products, start-ups and manufacturing.

**Infrastructure**
Design a 21st century infrastructure, an efficient regulatory system and align to local objectives.

**International**
Grow the global presence of Washington’s business.
## Policy Specifics Around Four Pillars

### TALENT and WORKFORCE
1. Prioritize career and technical education with apprenticeships, STEM, on-line learning and career info.
2. Achieve 60% post-secondary attainment rate.
3. Expand UI flexibility to fund training.
4. Fill critical skills gaps by backing visa reform.

### INVESTMENT and ENTREPRENEURSHIP
1. Support small business, STARs EIRs and early stage start-ups.
2. Strengthen innovation ecosystem by competing aggressively for federal funding.
3. Improve tax and regulatory policy to foster business and job creation.

### INFRASTRUCTURE and REGULATIONS
1. Develop alternative financing mechanisms for transportation.
2. Prioritize infrastructure investments of national significance.
3. Require economic development and sustainability criteria in capital budgeting process.
4. Reduce regulatory burdens and cost of compliance.

### INTERNATIONAL BUSINESS
1. Expand export assistance services and overseas reps.
2. Double state-led trade missions to increase exports.
3. Optimize state’s export assistance eco-system by creating private sector led export council.
4. Intensify innovation and collaboration in Pacific Northwest.

SOURCE: Policy Recommendations as of June 2012
I. Harness Talent to Win Skills Race
II. Invest in Entrepreneurship & Small Business

Diagram showing the stages of business growth:
- Idea
- Feasibility
- Development
- Launch
- Growth/Maturity

Stages:
- Proof
- Seed
- Start-up
- Early
- 1st, 2nd & Later Rounds

Valley of Death
Washington STAR Researchers

Smart Grid

UW
Hugh Hillhouse
Daniel Kirschen

WSU
Chen-Ching Liu

WSU – BSEL Center for Bioproducts and Bioenergy

Michael Hochberg

Birgitte Ahring
Faces of Emerging Industries
Entrepreneurs-in-Residence

Lars Johansson
Henry Berg
David Kaplan
Lewis Rumpler
Kevin Petersen
Chris Leyerle

Ronald Berenson
Stephanie Amoss
David Croniser
Bryan Zetlan
Karen Fleckner

Terri Butler
Ken Myer
Thomas Schulte
Peter Quinn
Jeff Canin
III. Modernize Infrastructure & Regulations

- Financing transportation
- Leverage collaboration
- Innovative capital investment
- Reduce regulatory burdens
IV. Expand International Business

**Industry Clusters in Washington**

- Electronic shopping and mail-order, 31.6%
- Remediation and other waste services, 24.8%
- Support activities for crop production, 8.5%
- Fruit and vegetable preserving and specialty, 6.1%
- Electronic shopping and mail-order, 31.6%
- Software publishers, 14.0%
- Fruit and tree nut farming, 11.2%
- Wireless telecommunications carriers, 4.5%
- Seafood product preparation and packaging, 1.1%
- Sawmills and wood preservation, -32.8%
- Aerospace product and parts manufacturing, 10.4%

(4-digit NAICS) By employment—excludes life, sciences, healthcare, retail. **Bubble size=employment magnitude.**

Innovation Partnership Zones

- Bellingham Innovation Zone
- Aerospace Convergence Zone
- North Olympic IPZ
- Tri-Cities Research District
- South Lake Union Life Science IPZ
- Spokane University District IPZ
- Bothell Biomedical Manufacturing Corridor
- Central Washington Resource Energy Collaborative
- Grays Harbor Sustainable Industries
- Pullman – Clean Tech Industries
- Walla Walla IPZ
- Interactive Media and Digital Arts
- King County Financial Services Collaborative
- Urban Business Center for Innovative Partnerships, Auburn
- Urban Clean Water Technology Zone, Tacoma
Innovation Partnership Zones

- **Challenge**: lots of innovation assets at the local level, but no coordination.
- **Assumption**: innovation happens at the grassroots.
- **Solution**: identify a consensus vision based on local assets and capabilities and create organizational, leadership structure to coordinate and align local efforts among businesses, ports, higher education, local government, tribes, and other stakeholders.
Accelerating Innovation Clusters

Innovation Triggers

- Talent
- STARS
- IPZs
- Patents
- EIRs
- Incubators
- R&D
- Tax Incentives
- Gap Funding
- SBIR

Trajectory

- Nascent
  - None or few firms
  - Growth potential
  - Some linkages

- Emerging
  - Few to many firms
  - Fast growth
  - Attraction of firms
  - Many linkages
- Accelerated collaboration
- Region to Region
- Next generation

Transformational

- Many nodes
- Dense linkages

JOBS Potential

- Attraction of firms
- Growth potential
- Innovation Triggers

WA Economic Development Commission
Pacific Northwest is an innovation powerhouse

If PNWER were a separate country, it would rank 14\textsuperscript{th} in total GDP

<table>
<thead>
<tr>
<th>PNWER Region (GDP/Pop.)</th>
<th>State/Prov.</th>
<th>GDP*</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash.</td>
<td>322,778</td>
<td>6,549,224</td>
<td></td>
</tr>
<tr>
<td>Alberta</td>
<td>291,300</td>
<td>3,735,086</td>
<td></td>
</tr>
<tr>
<td>B.C.</td>
<td>191,006</td>
<td>4,551,853</td>
<td></td>
</tr>
<tr>
<td>Oregon</td>
<td>161,573</td>
<td>3,782,991</td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td>52,747</td>
<td>1,545,801</td>
<td></td>
</tr>
<tr>
<td>Alaska</td>
<td>47,912</td>
<td>686,293</td>
<td></td>
</tr>
<tr>
<td>Sask.</td>
<td>41,296</td>
<td>1,049,701</td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td>29,885</td>
<td>974,989</td>
<td></td>
</tr>
<tr>
<td>NW Terr.</td>
<td>4,124</td>
<td>41,464</td>
<td></td>
</tr>
<tr>
<td>Yukon</td>
<td>2,026</td>
<td>34,157</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,144,647</td>
<td>22,901,559</td>
<td></td>
</tr>
</tbody>
</table>

*2009 population & GDP in $US Million

Data provided by PNWER – Pacific Northwest Economic Region
September 2012 celebrates Commerce & Innovation Economy
www.thenextfifty.org
Thank You!