

A scenic landscape of snow-capped mountains and a calm lake reflecting the scene. The mountains are rugged and covered in patches of snow, with a dense forest of evergreen trees in the foreground. The lake is still, creating a clear reflection of the mountains and sky.

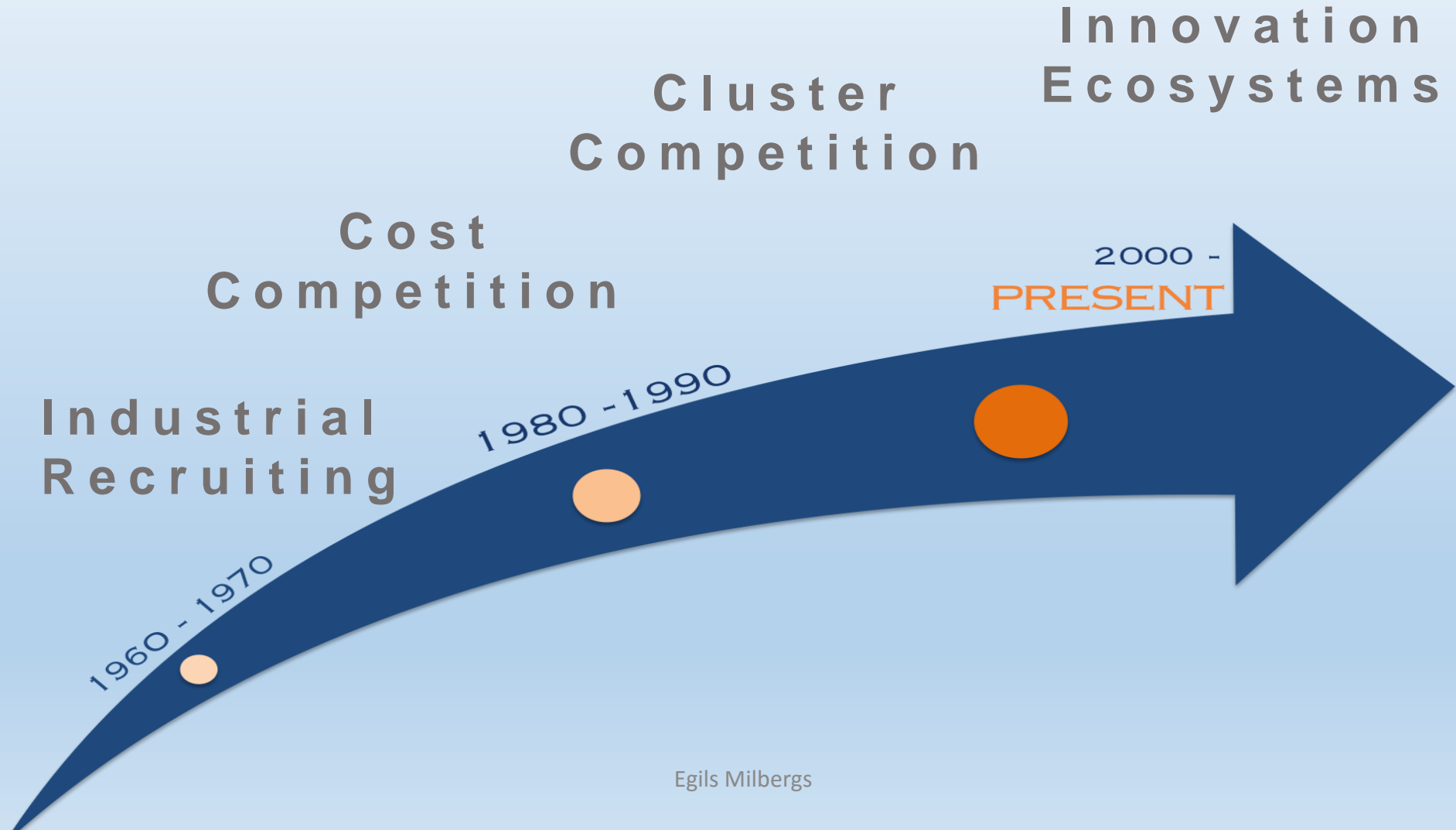
INNOVATION

Egils Milbergs
Center for Accelerating Innovation
Chair, Water Alliance
Pure Blue Clean Water Innovation Initiative

July 19, 2016
Pacific Northwest Economic Region Summit
Calgary, AB

Paths to Economic Growth

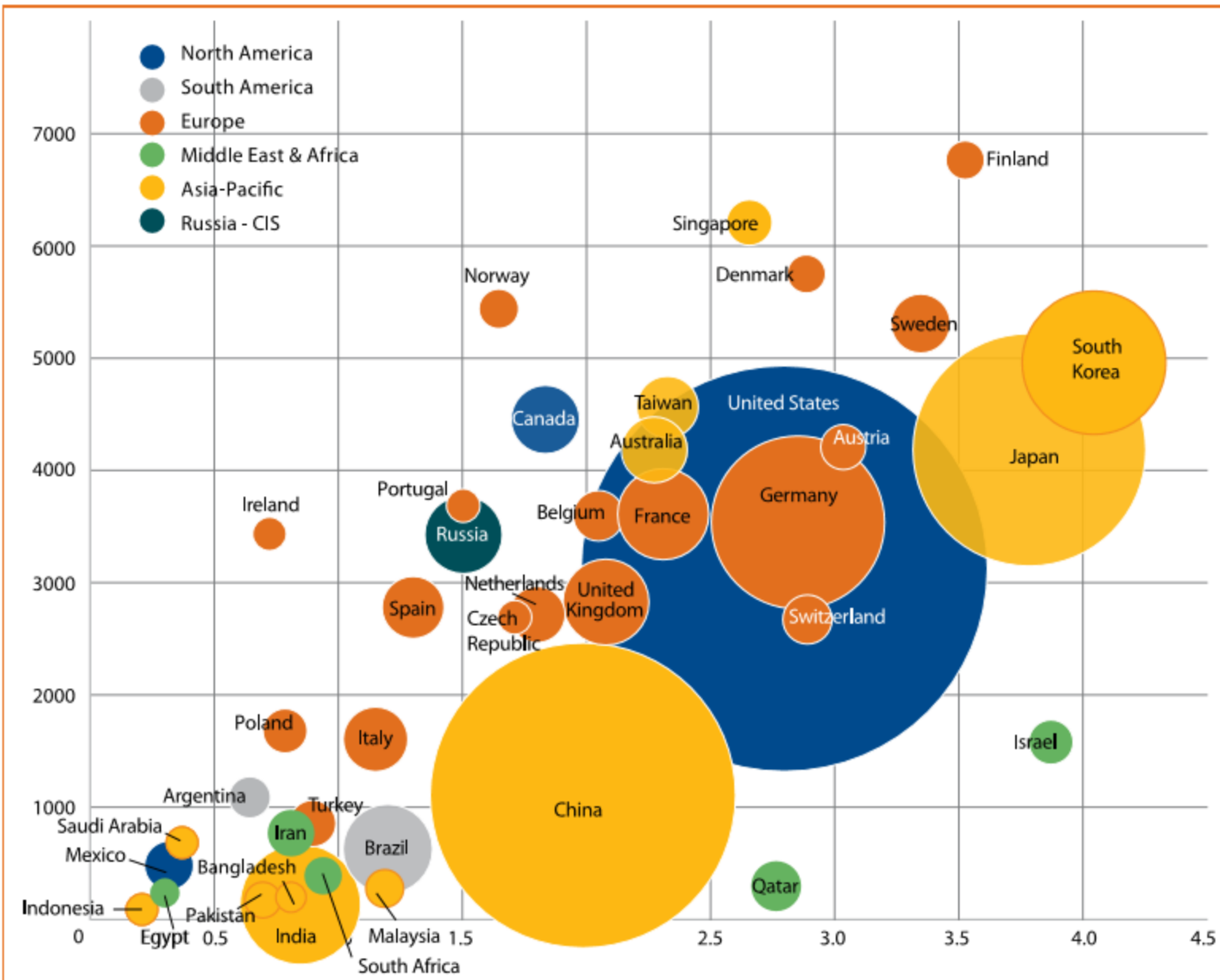
Over 50 years



Why Focus on Innovation

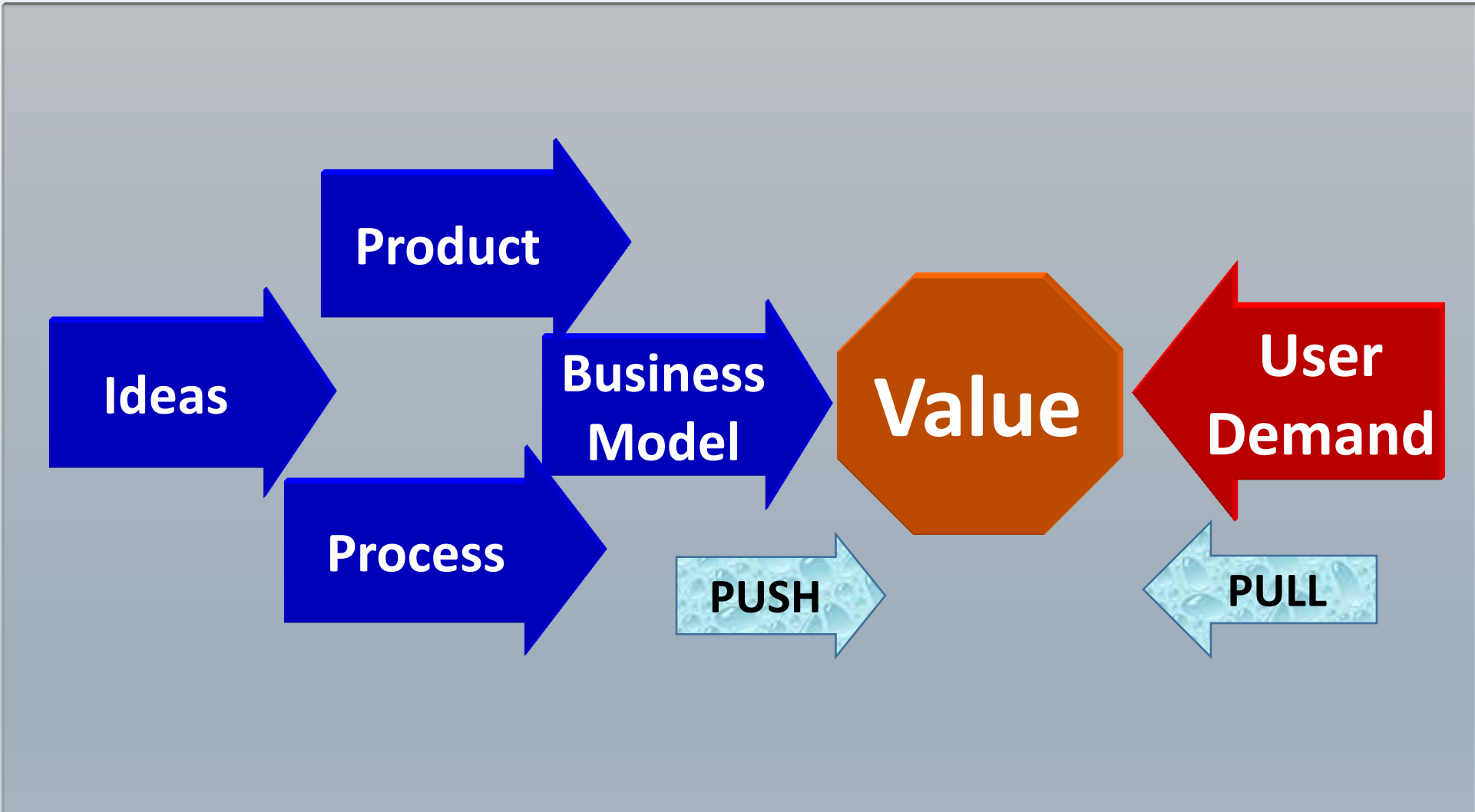


- 2/3 GDP growth from innovation
- Spillovers 2 to 4 times private return
- Technology industries pay 70% more
- Offsets low-wage nation advantages
- Helps solve critical energy, health, water, transportation, education, challenges



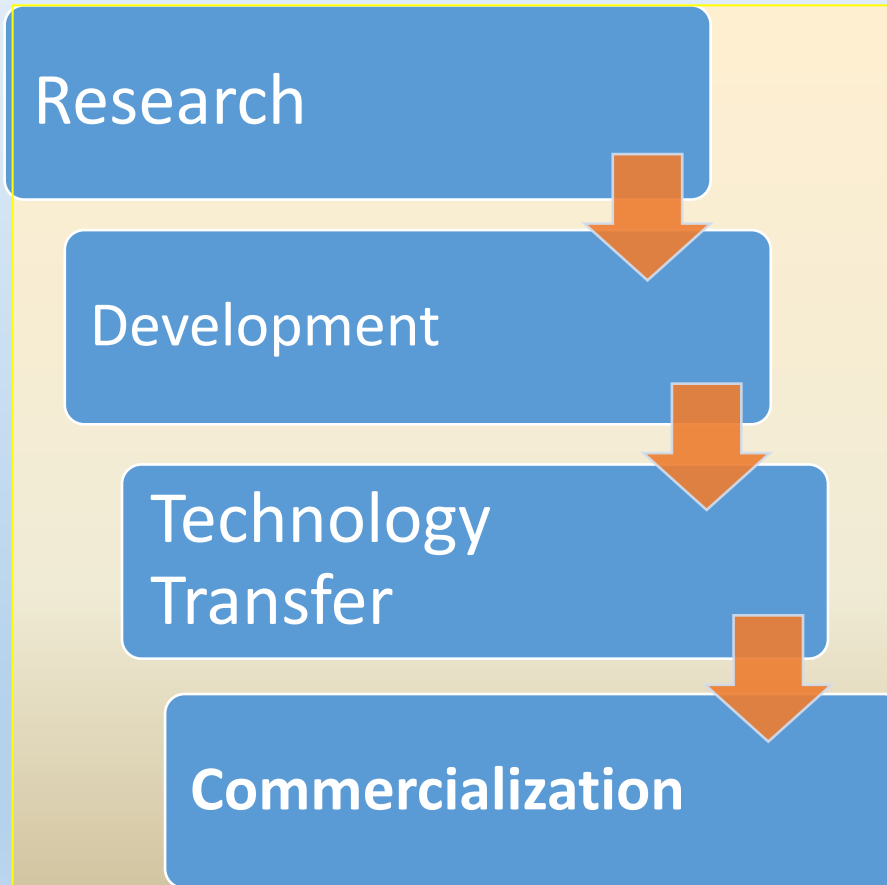
Size of the circles reflects the relative amount of annual R&D spending by the indicated country.

Innovation: Transforming Ideas to Value

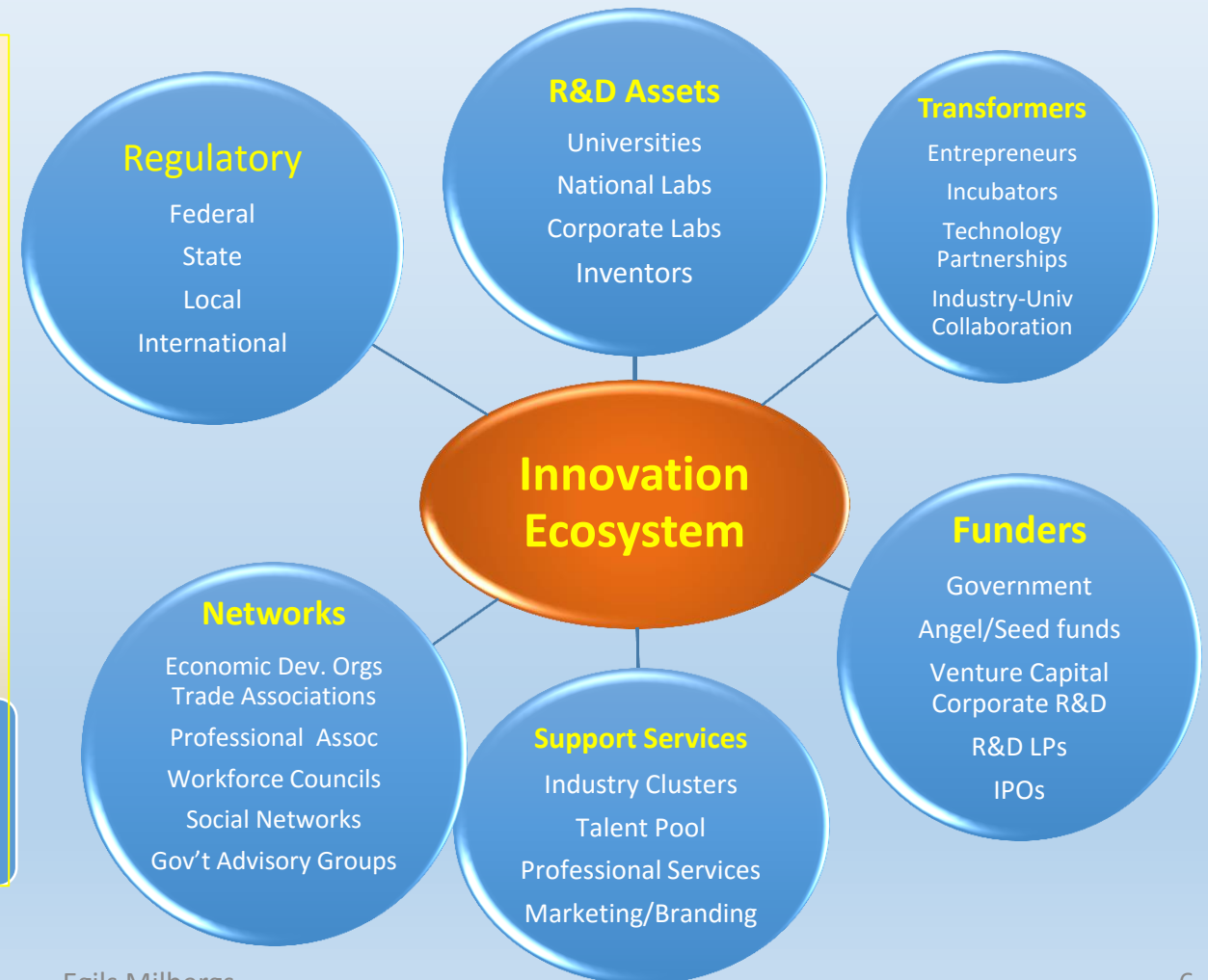


Slow vs. Fast Innovation Model

Linear Commercialization Model (push)



Innovation Ecosystem Model (pull)



A Better Approach for Economic Development

Traditional Model	Innovation Driven Model
Attract and retain companies	Invest in talent, ideas and infrastructure
Jobs	Quality of jobs, per capita incomes
Lowest cost of business inputs	Higher value inputs, increasing productivity and outcomes
Top down economic development	Bottom-up and organic growth
Competing regions: zero sum game	Collaborating regions: value creation
Closed linear innovation system	Open innovation ecosystem
Single disciplines, functions	Multiple disciplines, integration

Proactive Innovation Collaboration



The Council of State Governments
Sharing capitol ideas.



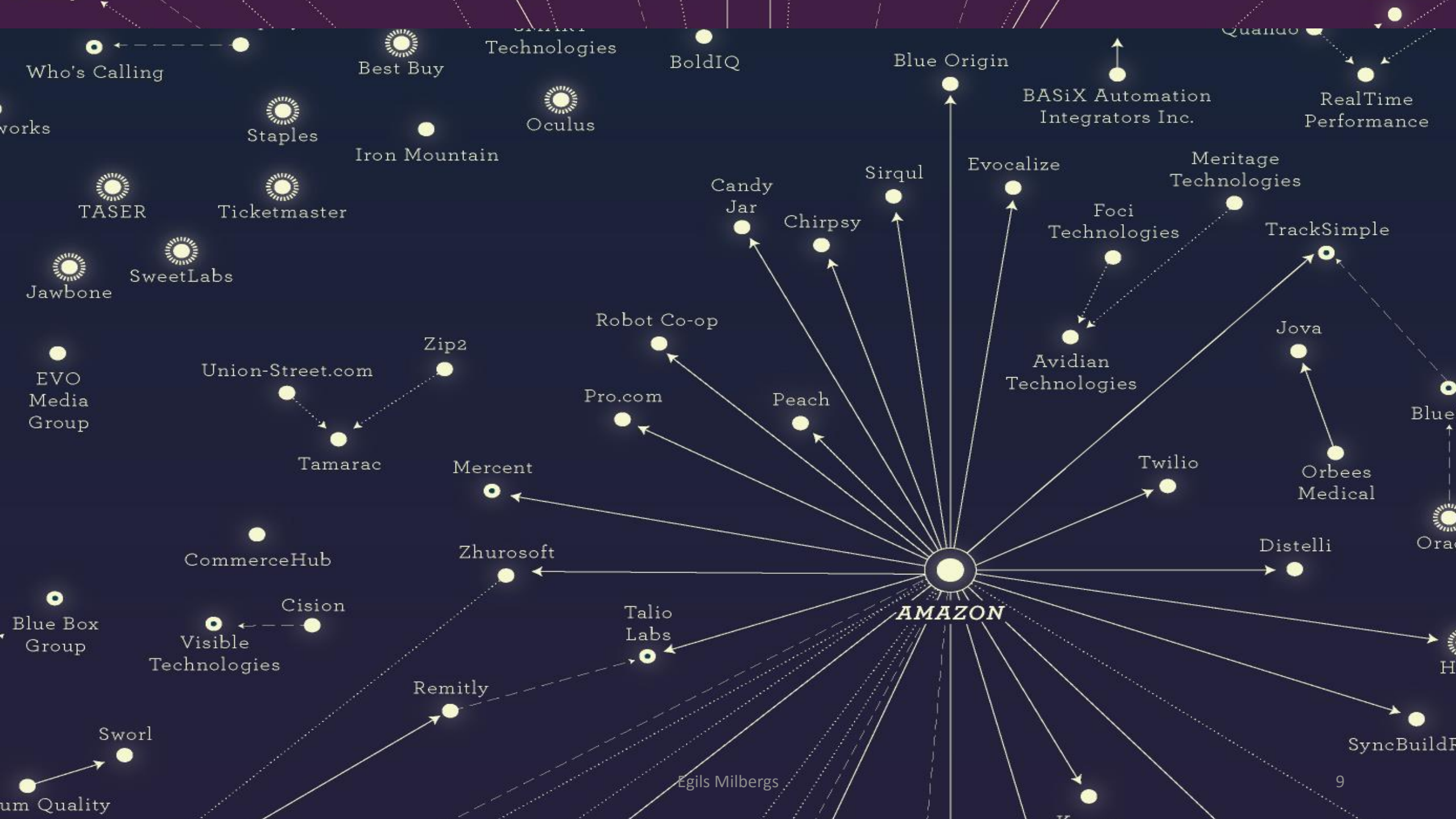
WASHINGTON STATE Innovation Partnership Zones



 Department of Commerce
Innovation is in our nature.

 IPZ | Washington State
Innovation Partnership Zones

- | | | | |
|--|---|--|--|
| 1 AUBURN
Sustainable Industrial Redevelopment | 5 REDMOND
Interactive Media and Digital Arts | 9 THURSTON COUNTY
Craft Brewing and Distilling | 12 SKAGIT VALLEY
Value-Added Agriculture |
| 2 BOTHELL
Biomedical Manufacturing | 6 SNOHOMISH COUNTY
Aerospace | 10 TRI-CITIES
Clean Energy, Energy Storage, Smart Grid | 13 VANCOUVER CAMAS
Applied Digital Technology Accelerator |
| 3 GRAYS HARBOR
Sustainable Advanced Manufacturing | 7 SPOKANE
Health Care, Energy Research | 11 WALLA WALLA
Wine and Hospitality, Water Management, Alternative Energy | 14 WILLAPA HARBOR
Resource Utilization and Renewal |
| 4 CITY OF ISSAQUAH
Sports Medicine | 8 TACOMA
Urban Clean Water | | |



Changing Nature of Work

- **Disturbing trends**

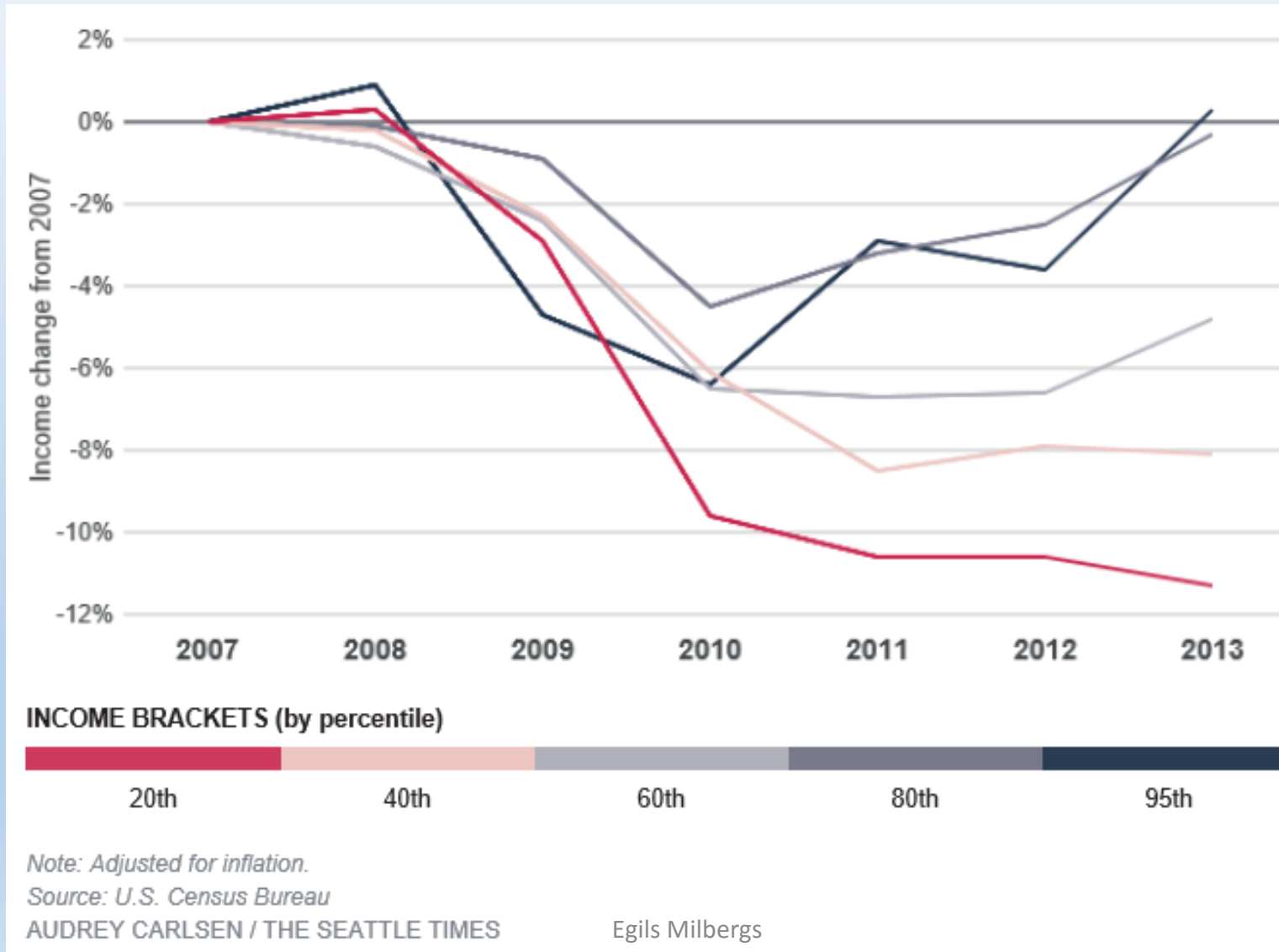
- Middle class jobs disappearing
- Income inequality
- Task outsourcing
- Rising cost of education
- Growth of 1099 workforce

- **Tough questions**

- Can job losers do newly created jobs?
- How do you educate people for jobs that don't exist?
- Is career planning an oxymoron?
- Is the sequence educate, work, retire model dead?
- Is the classroom an obsolete way to learn?

Change in Household Incomes

(Seattle-Tacoma-Bellevue)



The Ill-Prepared Education Pipeline

- ❑ Of 100 students entering 9th grade only 36% go directly into college
- ❑ WA ranks 46th in college continuation rate
- ❑ WA ranks 47th in Bachelor's degree production
- ❑ Bad Implications:
 - Continued skill gaps
 - Lost productivity
 - Need to import talent
 - More poverty
 - High social overhead

How susceptible are jobs to automation?

47% of occupations are at risk

Oxford Martin Program on the Impacts of Future Technology

The Future of Learning

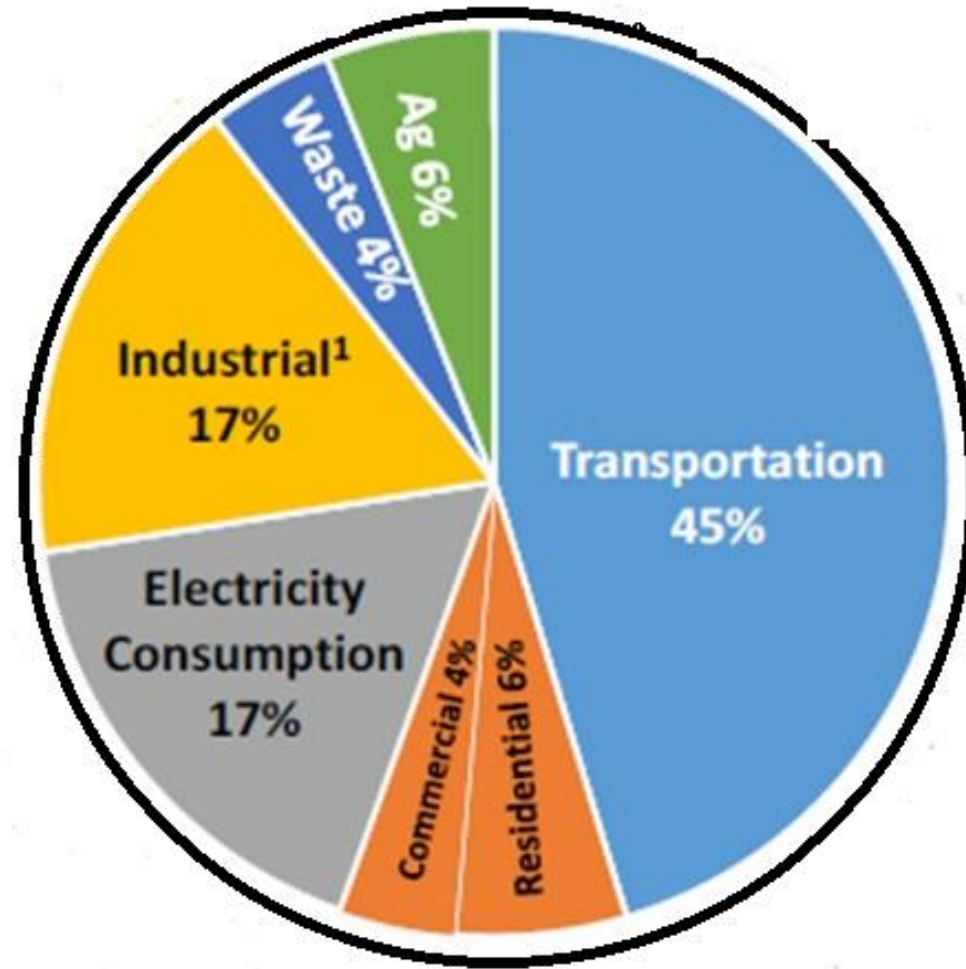
- K-99
- Relevant/predictive
- Self-directed/flexible
- Location independent
- Social & participatory
- Gamification & fun
- Micro-credentials
- Industry supported

The Wearable University?



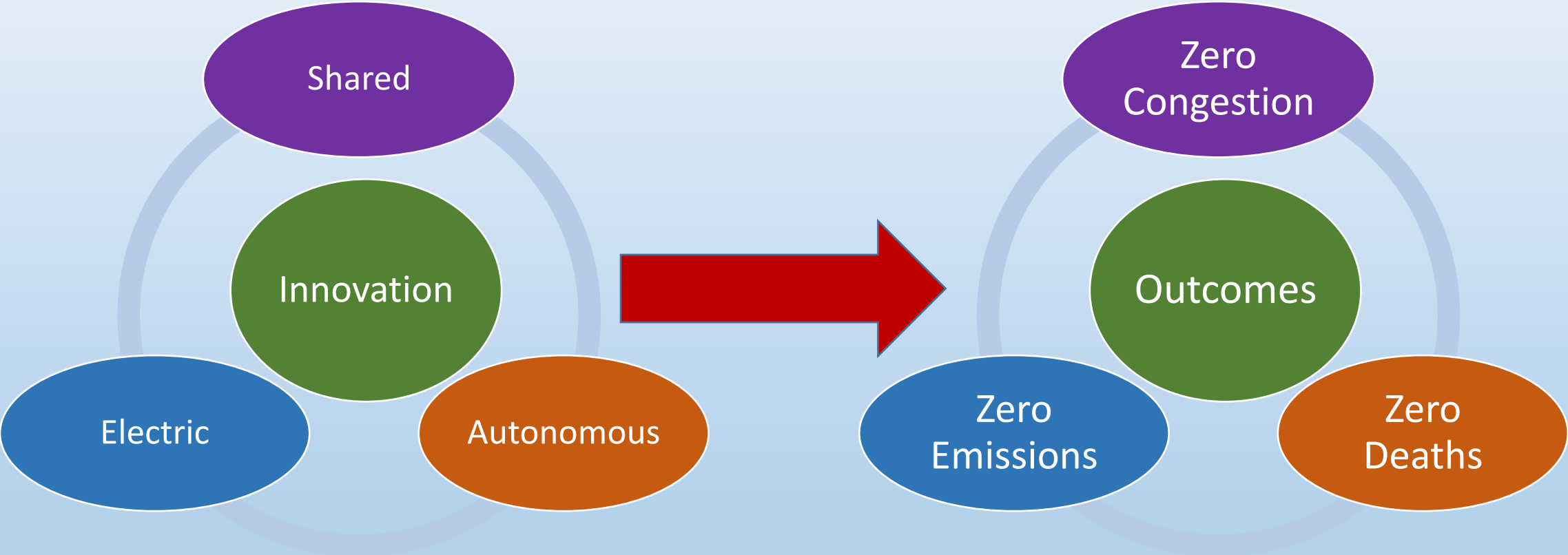
The ACES Example



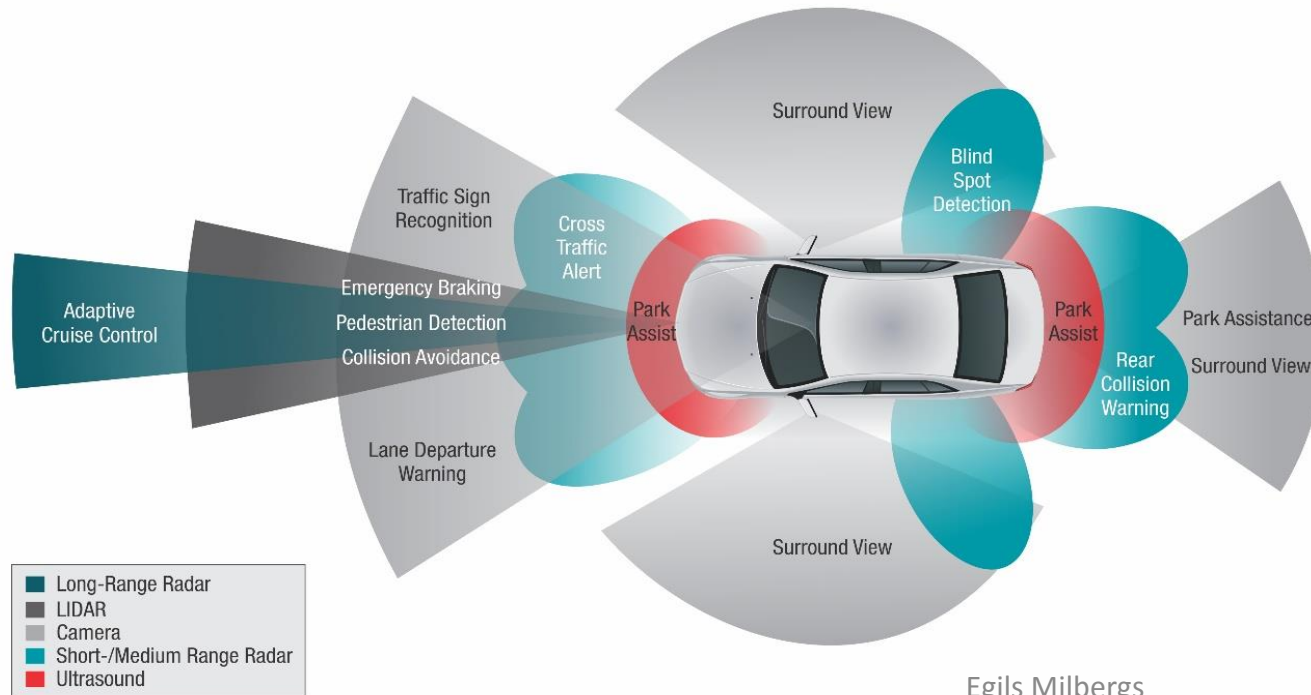


**Total 2011 GHG emissions:
92.4 Million Metric Tons CO₂e**

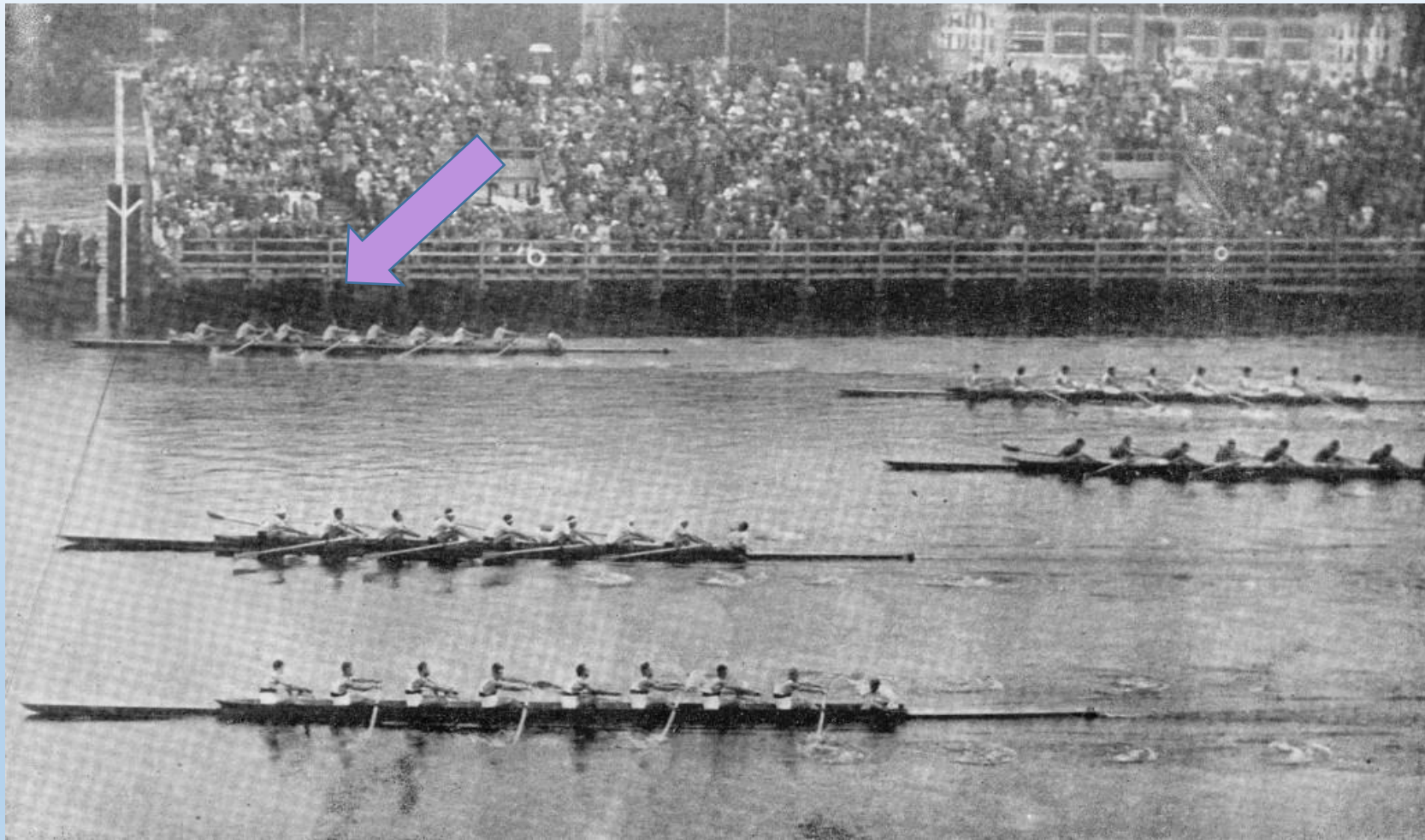
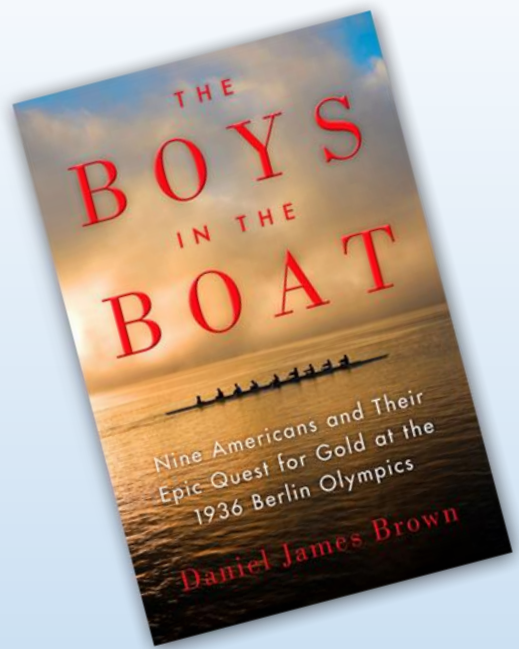
Transformative Path



Driverless Cars Are Closer Than They Appear



A Pacific NW Innovation Strategy?



Thank You!
Egils Milbergs



World's Largest Innovation Park



What Level of Innovation Are You?

- 1** Fully developed innovation culture, networks and ecosystem
- 2** Portfolio public-private initiatives systematically monitored
- 3** Innovation integrated into community economic strategy
- 4** Sector innovation projects
- 5** Innovation is random & accidental

Rear View Mirror

- Economic baseline
- Cluster Analysis
- SWOT Analysis
- Strategic Plan
- Performance Analysis



Windshield

- Visioning Future
- Connecting Stakeholders
- Creating Strategy
- Owning Initiatives
- Managing Performance

