

Catalyzing the Growth of Innovation Clusters in the Pacific Northwest

A research collaboration between PNWER,
Moonbeam, and the University of
Washington's Jackson School



*Pacific NorthWest
Economic Region*



JACKSON SCHOOL OF INTERNATIONAL STUDIES
UNIVERSITY of WASHINGTON

moonbeam



July 21-25, 2019

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Research, Identify, and Support

In Spring 2019, PNWER, Moonbeam, and UW partnered to map the innovation economy in the PNW, specifically:

- Identify underleveraged or emerging innovation clusters in the region;
- Propose linkages between the clusters;
- Make recommendations for how PNWER can help catalyze their growth.

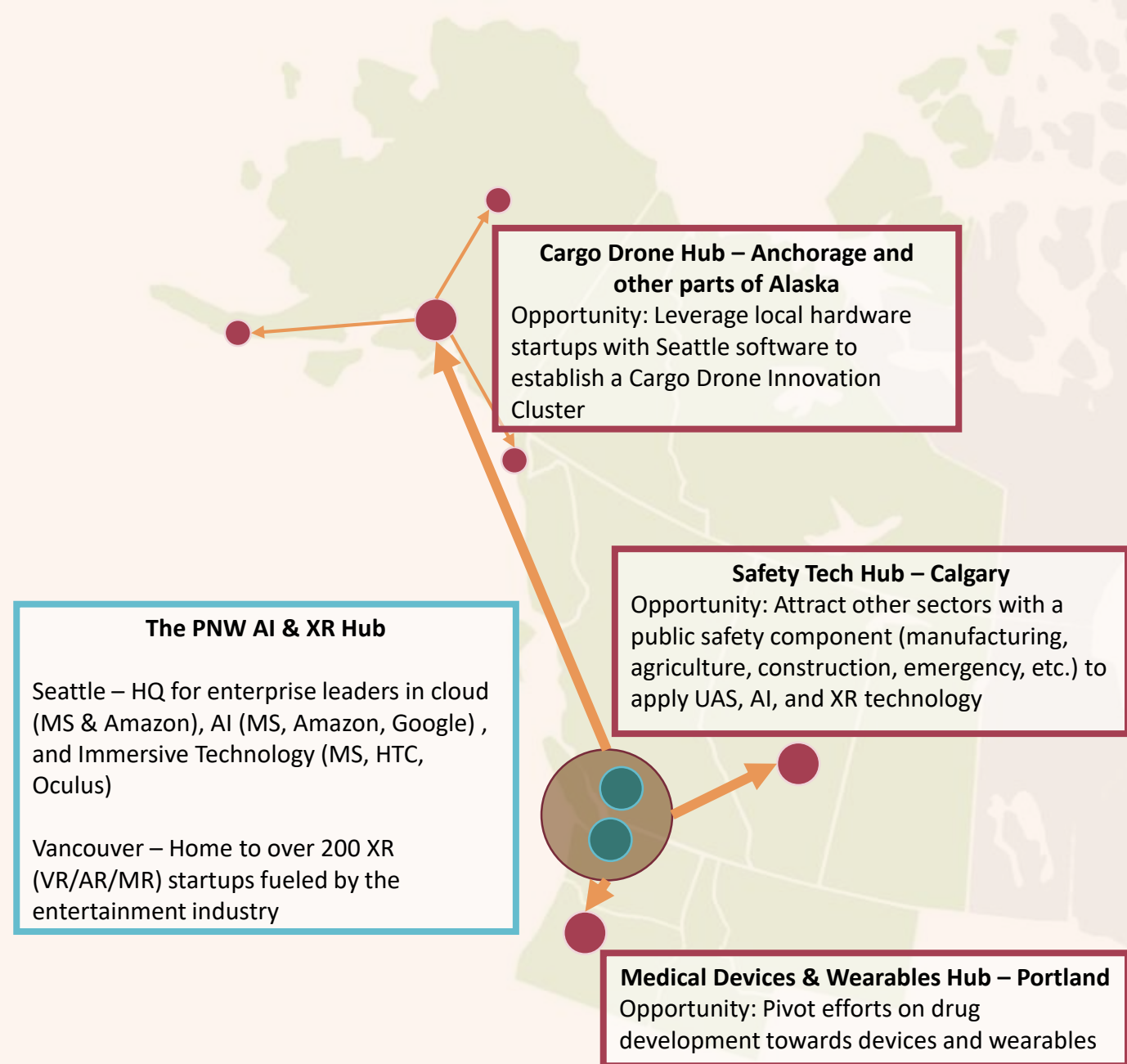


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Executive Summary

Our analysis identified key innovation drivers, capabilities, gaps, and opportunities borne from collaboration. Looking at government R&D spend, startup activity, capital investment and spend, workforce, industry demographics, and extensive stakeholder interviews, we identified:

- An emerging cargo drone hub in Anchorage;
- An opportunity for build a safety tech hub in Calgary;
- A potential pivot toward devices and wearables in Portland;
- And global centers of excellence in AI and immersive tech in Seattle and Vancouver.



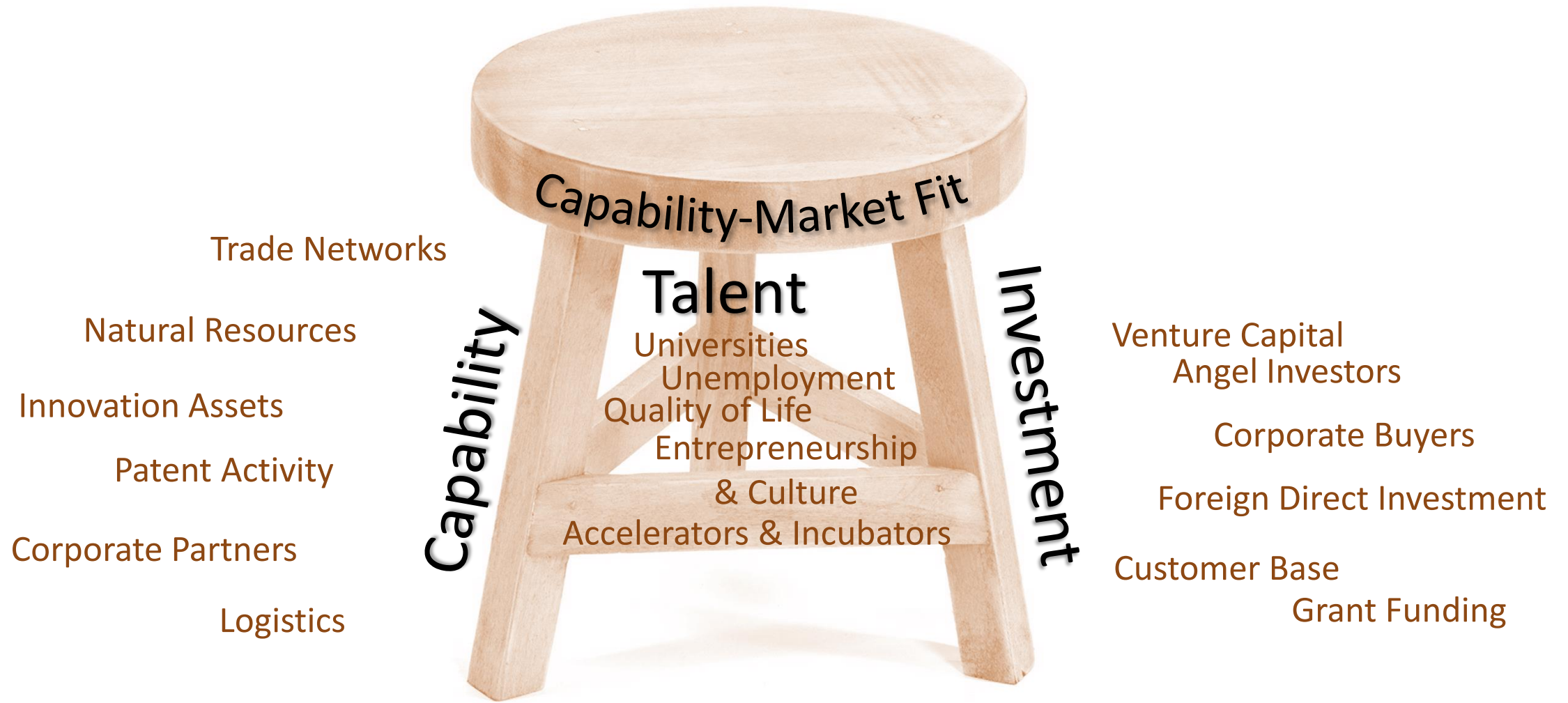
Successful genius clusters rely on three key components



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Methodology

We applied a 5-step process to this analysis to identify innovation clusters and connections.

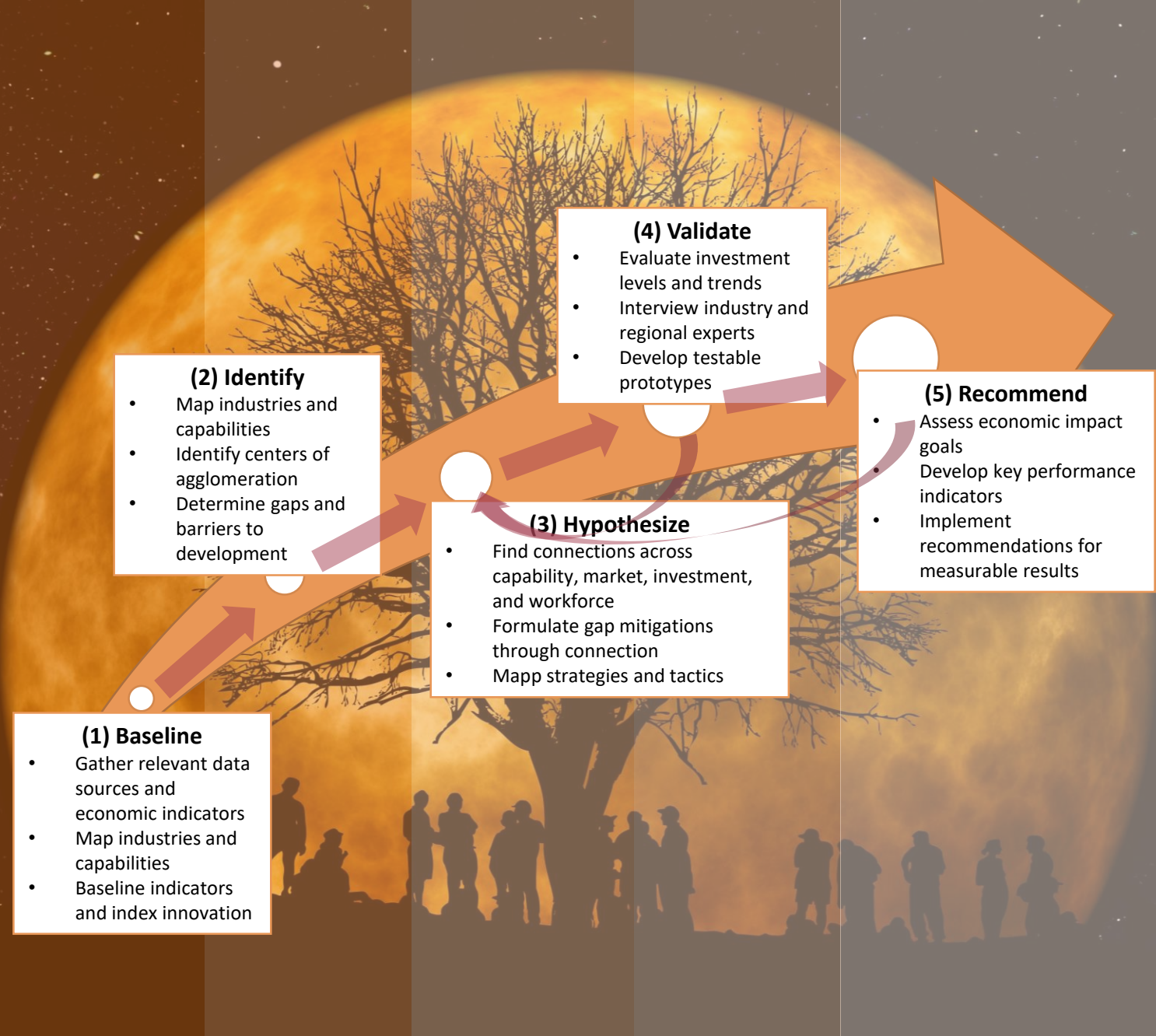
To facilitate this analysis, we leveraged a variety of data sources and data sets:

federal spend | venture deals | foreign direct investment | demographics | corporate activity
university R&D | patents | growth trends
workforce metrics

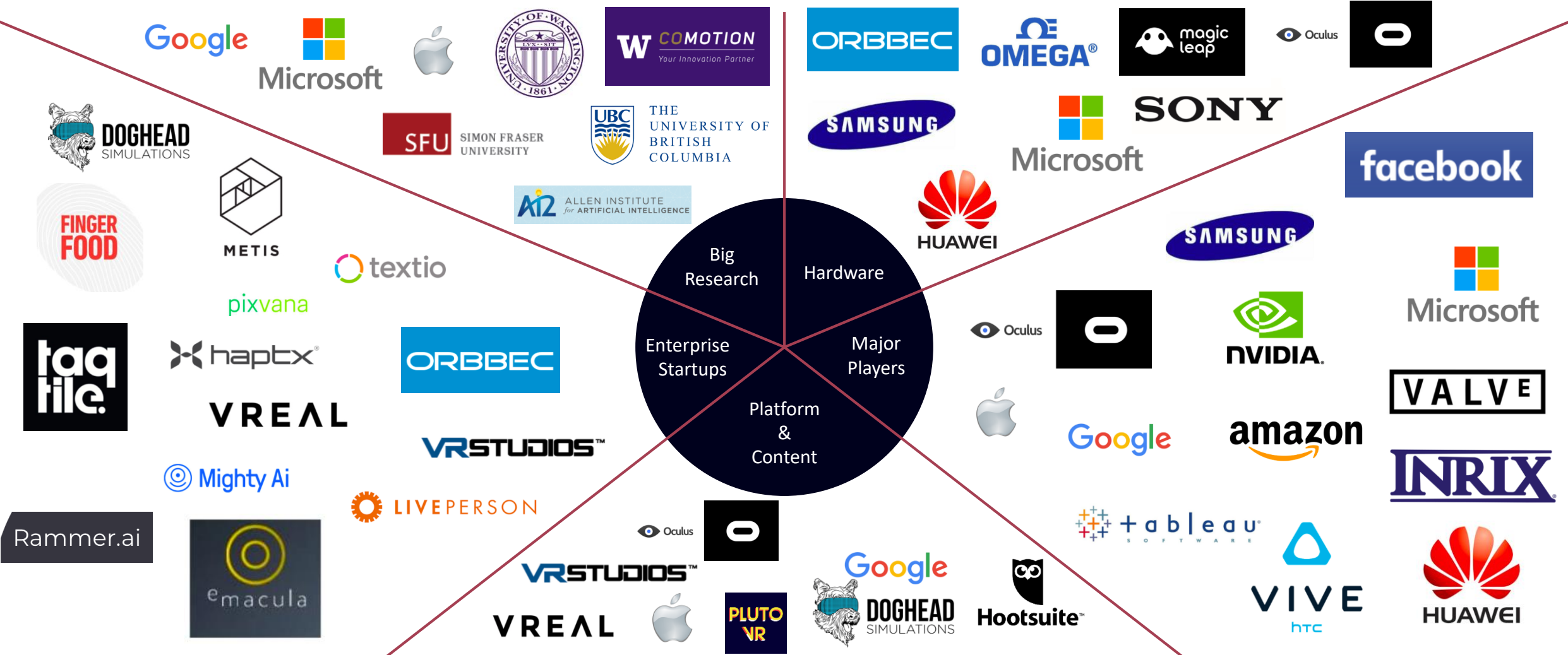
PitchBook

crunchbase

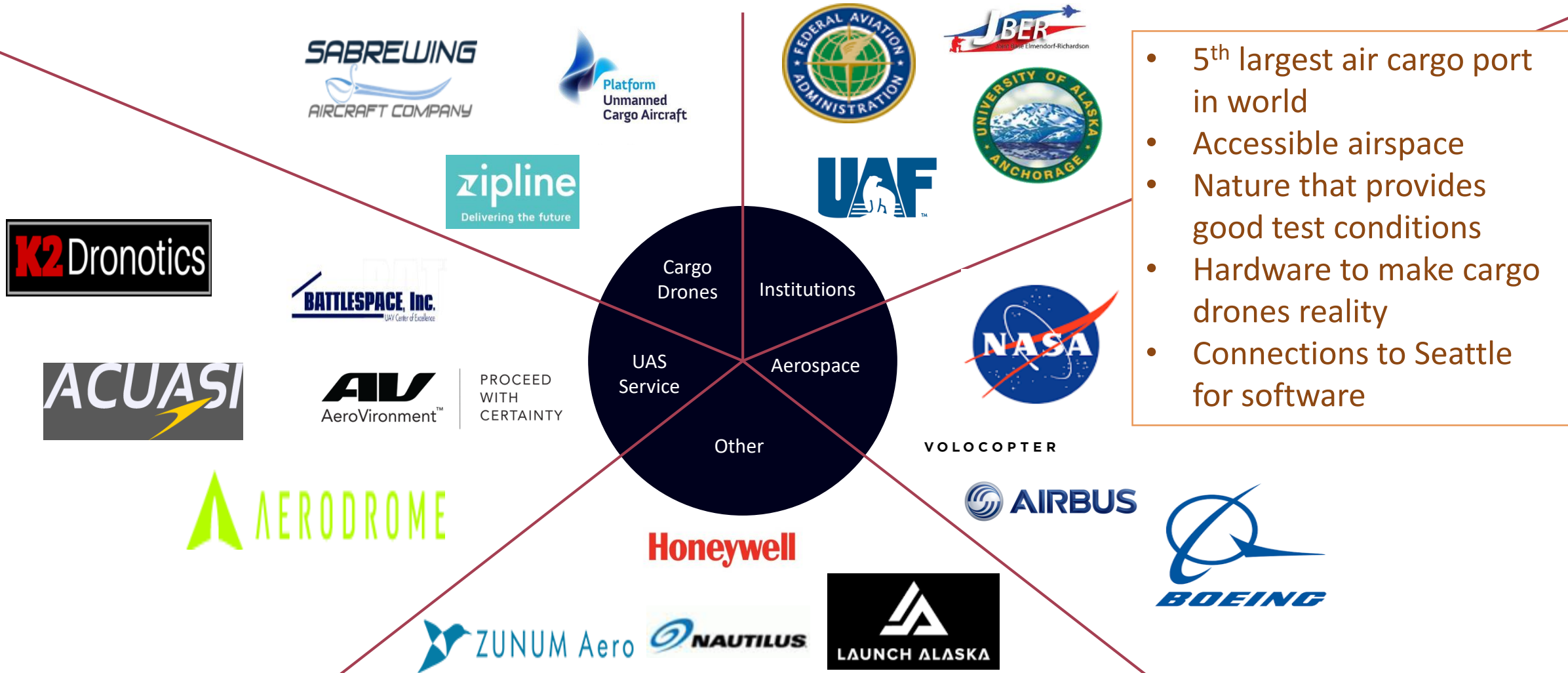
RATIO
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EXCHANGE



Seattle and Vancouver represent a Globally Recognized Hub for Artificial Intelligence, Cloud, and Immersive Technology



Alaska can retain their incumbency in cargo by embracing Cargo Drones.



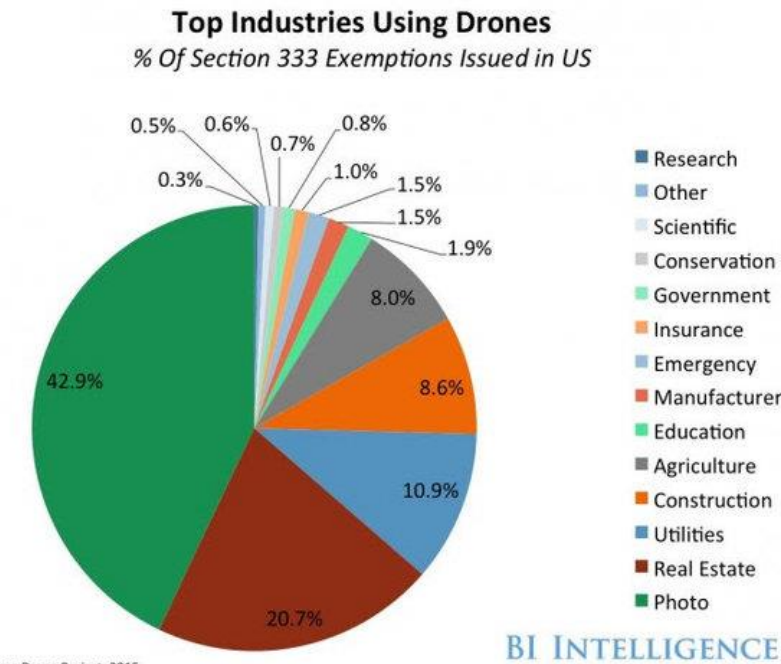
- 5th largest air cargo port in world
- Accessible airspace
- Nature that provides good test conditions
- Hardware to make cargo drones reality
- Connections to Seattle for software

SafeTech Calgary: 2300+ Public Safety Related UAS, Geospatial, and Sensor Companies with a potential to grow beyond Oil & Gas



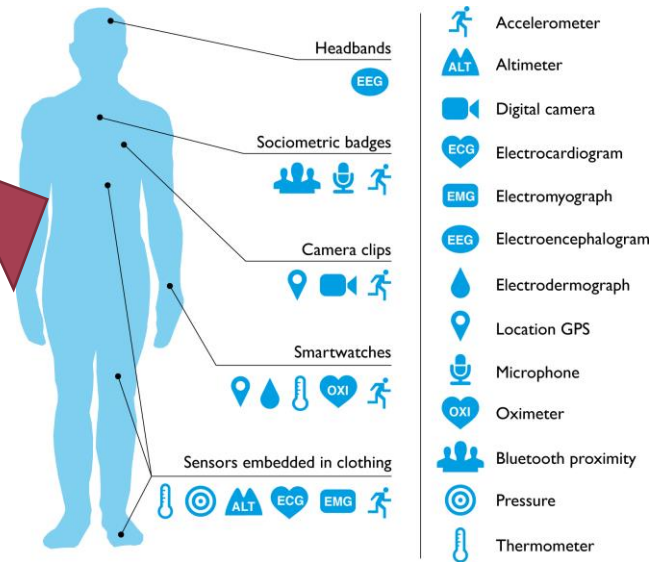
SafetyTech has the potential to improve several incumbent industries, including:

- Research & Science
- Government
- Insurance
- Manufacturing
- Agriculture
- Construction
- Utilities
- Real Estate



Portland has the potential to be a leader in Medical Devices & Wearables.

- Existing centers of excellence in IT Hardware, Sports Tech, Retail, and Apparel
- Over 216 Life Sciences firms and 3 Universities



- Major employers like Intel and Nike bring world class talent to Portland
- Strong Universities provide a pool of talent
- Portland has a great reputation as a "Cool City"

- Oregon has invested over \$1.2B private and federal R&D in developing life sciences
- \$27B/yr. market impact from Intel resulting is a robust angel ecosystem



Recommendations to PNWER

For Oregon

- i. The Oregon legislature to hold a hearing on the economic potential of wearables and medical devices. Interested committees include the Senate Business and General Government Committee, the House Business and Labor Committee, and the House Economic Development Committee.
- ii. A forum on wearables and medical devices to be created as part of an existing event in the Oregon business space. PNWER should assess public and private sector entities to identify possible host events. They should also recommend speakers and invitees.

For Alberta

- i. Alberta to join the existing UAS information-sharing partnership between WA, OR, and ID.
- ii. Alberta Provincial Government and Transport Canada Civil Aviation (TCCA) to establish an industry council to conduct a study identifying public safety applications for Calgary's UAS, geospatial, navigation, and global positioning ecosystem.
 - a. Calgary Economic Development (CED) to seek out UAS and public safety conferences in other regions for Calgary-based companies to attend.
 - b. CED and the Calgary Municipal Government to create a seminar that assists UAS, geospatial, navigation, and global positioning companies with marketing to a public safety audience.
- iii. The Alberta Ministry of Economic Development and TCAA to organize a UAS and public safety conference.

For Alaska

- i. Write an advocacy letter to Alaska Senators advocating for federal funds for drone research that benefits the commercial drone industry.
- ii. Advise that the Alaskan government should assist educational institutions, University of Alaska Anchorage (UAA) and Fairbanks (UAF), in seeking federal funds and other outside funding for innovation-related research.
- iii. Advise the Alaskan government to increase state procurement of UAS services instead of manned aircraft in certain aspects of their daily operations.
- iv. PNWER members should to attend one of the annual summits of Alaska Unmanned Aircraft System Interest Group sponsored by University of Alaska.



THANK YOU

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