Cascadia Innovation Corridor - Vision 2050

A MEGA-REGION SUSTAINABLE GROWTH VISION

FEBRUARY 2020
Context: Cascadia Innovation Corridor

Challenge Seattle and the Business Council of British Columbia have partnered together to realize the vision of Cascadia.

Together the organizations have assembled the region’s top business, research and community leaders who share a common vision of maturing the Cascadia Innovation Corridor into a single sustainable region, with a shared sense of identity, growth, employment and connectivity.

The Cascadia Innovation Corridor Steering Committee will leverage key assets and infrastructure to support a strong cross-border economy and position the region as a global innovation hub.

Note: Illustrative representation of Cascadia depicted by county / regional districts
Source: Cascadia Innovation Corridor

Low population density (~10 people / sqmi.)
High population density (~4000 people / sqmi.)

Interstate 5
Report overview

1. **Intro and purpose**
   Global leader in high growth, knowledge base economies w/high quality of life
   With that comes real challenges to sustainable growth
   Embrace a new, integrated vision of the future, a first for any mega-region

2. **Benchmarks, projections**
   Focus on elements of sustainable growth that can best be addressed at mega-region level
   Benchmark other mega-regions, good and bad examples
   CIC¹ 2050 projections against benchmarks

3. **Hub and spoke vision**
   Evaluating options to enable growth
   Vision: high density hub cities connected by transit with robust industry clusters
   Cost and benefit
   - High speed transit
   - Housing
   - Jobs
   - Emissions

4. **Next steps, conclusion**
   Summary of challenges and exciting view of what’s possible if we work together to achieve, including who needs to do what to realize the vision
   High-level roadmap of actions to accomplish

1. Cascadia Innovation Corridor (CIC)
Cascadia has grown tremendously and will continue to do so.

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2020</th>
<th>2050E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>5.7M</td>
<td>9.3M</td>
<td>12-13M</td>
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<tr>
<td>GDP</td>
<td>$200B</td>
<td>$740B</td>
<td>$1.5T+</td>
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<tr>
<td>Median income</td>
<td>$34k</td>
<td>$84k</td>
<td>$150k+</td>
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Since 2000, GDP, income, and population have grown 2X+ faster than Canadian or US average.

However growth doesn’t come without its challenges.

How can our mega-region serve as a sustainable model for high growth, knowledge-based economies?
World Bank definition of sustainable cities provides foundation for defining a sustainable mega-region

3 pillars of sustainable mega-region

- Housing & development
- Transportation
- Environmental stewardship

More effectively addressed at regional/city level

- Preserved environmental and physical assets
- Local government with fiscal, administrative capacity
- Inclusive health care and education access
- Access to jobs

Robust economic growth

Reduction in greenhouse gas emissions and protection of ecosystems

Inclusiveness and livability

Affordable housing

Mixed-use urban form, relatively dense

Integrated transit system

Uses clean energy & smart tech to reduce environmental impact

Benefits to address at mega-region level

- Robust economic growth
- Inclusiveness and livability
- Reduced greenhouse gas emissions and protection of ecosystems

Source: World Bank
Knowledge-based mega-regions develop into 2 types

1. Median monthly housing payment (US assumptions) / median monthly gross income  
2. Composite of two transportation metrics: mean total commute to work in minutes and percent congestion (ratio of free-flow commute time to peak-hour commute time)

Sources: US Census; Real Estate Board of Great Vancouver; Statistics Canada; TomTom Traffic Index; Texas A&M Travel Institute; Zolo; Numbeo (adjusted); Brussels Institute for Statistics & Analysis; Conseil General de L'Environnement et du Developpement Durable; Department of Statistics Malaysia; The Edge Markets; Department of Statistics Singapore; Today Online; BCG analysis
On current trajectory, Cascadia will face substantial challenges by 2050

- **30%**: Increase in congestion
  
  Even accounting for autonomous vehicle impact and ST3 investments

- **21%**: Increase in % income spent on housing
  
  Exceeds SF’s current levels

- **73%**: Gap to transportation emissions goal
  
  Our share of goal to limit global average temperature increase to 1.5º C

Source: US Census Bureau, Real Estate Board of Greater Vancouver, Statistics Canada, TomTom traffic index, Texas A&M Transportation Institute, US EPA, US Energy Information Administration, BCG analysis
Cascadia 2050?

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Status quo densification is not enough to absorb Cascadia population influx by 2050

2050 Population Growth (M)

- Projected increase: 3.6
- Absorbed by ongoing densification: 2.3
- Gap: 1.3

How can 1.3M people be distributed?

1. **Sprawl**: Would require 400+ square miles of additional green space to be developed (size of 8 Seattle’s).

2. **Up-zone**: Would require turning 325K single family homes into multi-family dwellings.

3. **Hub city**: Greenfield cities ~400k people, ~250k jobs, and connected by high-speed transit.

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1. Within Vancouver, Seattle, and Portland MSA; projected based on 2010-2020 growth rates for cities as well as available city plans. Assumes average density of ~3K per sq. mile. Assumes multi family developments can hold 4x the population.

Source: Puget Sound Vision 2050; Metro Vancouver Regional Planning Commission, Oregon Metro Regional Transit Plan, BCG Analysis.
Each path forward impacts affordability, congestion, and emissions differently

<table>
<thead>
<tr>
<th>Path Forward</th>
<th>Affordability</th>
<th>Congestion</th>
<th>Emissions</th>
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<tbody>
<tr>
<td><strong>1 Sprawl</strong></td>
<td>✗ Continuation of current trend; displaces low and middle income</td>
<td>✗ Increases as more workers commute from farther out (e.g., North Bend is the new Issaquah)</td>
<td>✗ GHG&lt;sub&gt;1&lt;/sub&gt; emissions growing from auto traffic and single family construction</td>
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<tr>
<td>• Continued development of low to medium density housing across region</td>
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<td><strong>2 Up-zone</strong></td>
<td>✗ Higher development cost to convert single family units will likely be passed on to buyers/renters</td>
<td>≈ Requires continuing investment in transit</td>
<td>+ Shorter commutes; higher percent lower emission multi-family housing</td>
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<tr>
<td>• Convert single family into dense multi-family housing</td>
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<tr>
<td><strong>3 Hub cities</strong></td>
<td>+ Lower land cost and potential for innovative development approaches</td>
<td>+ High-speed transit to urban core; high portion of intra-hub commuting</td>
<td>+ Shorter commutes; higher percent lower emission multi-family housing</td>
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<tr>
<td>• Greenfield development of new high density zones</td>
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<tr>
<td>• Enabled by high-speed transit</td>
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1. Greenhouse gas emissions
Hub city vision key enabler of achieving aspiration

- Built around industry clusters to provide significant portion of jobs in the Hub
- Connected by high-speed transit
- Anchored by world-class education and research facilities
- High livability (green space, culture, entertainment)
- High density housing across all affordability levels
- Integrated 'last-mile' transit (e.g., autonomous buses, light rail)

Hub and transit locations for illustration only

Preliminary rendering only, not for distribution
A more affordable, less congested, and greener Cascadia in 2050 is possible with decisive action today

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Illustrative timeline to achieve vision

- **2025**
  - Planning, vision alignment, and mitigation actions from existing cities/regions
  - Hub city selection process initiated
  - High-speed transit mode decided

- **2035**
  - Location of hub cities decided and construction planned/underway
  - Employers from key industries committed to new hub cities (i.e., bringing jobs and people)
  - Post-secondary or research institution committed to new hub city
  - Local transit authorities in hub cities spun up and integrated into greater high-speed line

- **2045**
  - High-speed transit fully operational
  - Hub cities close to mature with population and industry settled
Cascadia must rise to the challenge, embrace a new definition of success, and provide an example for the world of a sustainable mega-region.

Path to achieve 2050 aspiration is hard but achievable

Where to start:

**Near-term**
- Continue to increase density around transit stops
- Continue to grow number of jobs and increase density in existing edge cities (e.g. Surrey, Tacoma)
- Turn high-speed-transit into reality

**Long-term**
- Develop integrated approach to planning hub cities - transit, housing, and industry