REVISED AGENDA - COMMITTEE OF THE WHOLE

Thursday, May 20, 2021, 9:00 A.M.

6TH FLOOR BOARDROOM, CAPITAL REGIONAL DISTRICT, 625 FISGARD STREET, VICTORIA, B.C.

The City of Victoria is located on the homelands of the Songhees and Esquimalt People

Due to the COVID-19 Pandemic, public access to City Hall is not permitted. This meeting may be viewed on the City's webcast at www.victoria.ca

Meeting will recess for a lunch break between 12:30 p.m. and 1:15 p.m.

Pages

A. APPROVAL OF AGENDA

*B. CONSENT AGENDA

Proposed Consent Agenda:

- *G.1. - 1150 Douglas Street: Local Government Recommendation for Cannabis Application (Downtown)*
- *G.4. - Proclamation - Intergenerational Day Canada*
- *G.5. - Proclamation - World Refugee Day*
- *G.6. - Proclamation - Action Anxiety Day*

C. READING OF MINUTES

D. UNFINISHED BUSINESS

E. PRESENTATIONS

*E.1. Victoria 3.0 Recovery Reinvention Resilience Progress Report *1*

Addendum: Updated Appendix A & Presentation

A report regarding the Victoria 3.0 economic action plan that aligns with the City's Official Community Plan to 2041.

F. LAND USE MATTERS

G. STAFF REPORTS

*G.1. 1150 Douglas Street: Local Government Recommendation for Cannabis Application (Downtown) *217*

Addendum: Letter from Applicant

A report regarding an application by Seed and Stone for a provincial cannabis retail store license at 1150 Douglas Street.

*G.2. Options to Support Rapid Deployment of Affordable Housing through Regulatory and Process Changes 230

Addendum: Presentation

A report regarding options and recommendations that support the development of affordable and supportive housing through regulatory and process changes.

*G.3. The City of Victoria Electric Vehicle Strategy 242

Addendum: Presentation

A report regarding the directions contained within the draft City of Victoria Electric Vehicle Strategy.

G.4. Proclamation - Intergenerational Day Canada 346

A report regarding the proclamation for Intergenerational Day Canada, June 1, 2021.

G.5. Proclamation - World Refugee Day 349

A report regarding the proclamation for World Refugee Day, June 20, 2021.

*G.6. Proclamation - Action Anxiety Day 352

Addendum: New Item

A report regarding the proclamation for Action Anxiety Day, June 10, 2021.

H. NOTICE OF MOTIONS

I. NEW BUSINESS

*I.1. Council Member Motion - Addressing Parking Pressures in Victoria West

Addendum: Updated Council Member Motion

A Council Member Motion addressing parking pressures in Victoria West.

*I.2. Council Member Motion - Support for Housing Outreach Pilot Project 355

Addendum: Correspondence and New Attachments

A Council Member Motion regarding support for a Housing Outreach Pilot Project.

*I.3. Council Member Motion - Establishment of City of Victoria International Decade of People of African Descent (IDPAD) Advisory Committee 364

Addendum: New Item

A Council Member Motion regarding the establishment of the International Decade of People of African Descent (IDPAD) Advisory Committee and its Terms of Reference.

*I.4. AVICC City of Victoria 2021 Resolutions - selection of speakers for resolutions

Addendum: New Item

J. ADJOURNMENT OF COMMITTEE OF THE WHOLE

Committee of the Whole Report
For the Meeting of May 20, 2021

To:	Committee of the Whole	**Date:**	May 14, 2021
From:	Kerri Moore – Head of Business & Community Relations		
Subject:	Victoria 3.0 Recovery Reinvention Resilience Progress Report		

RECOMMENDATION

That Council:

1. Approve $117,000 from the 2021 Financial Plan contingency budget to support the initial planning for the Arts & Innovation District.

EXECUTIVE SUMMARY

Victoria 3.0 is an economic action plan that aligns with the City's Official Community Plan to 2041. It's a long-term plan and vision for a sustainable, influential city that will build a strong innovation ecosystem and create a resilient and inclusive economy now and into the future. The actions outlined will build an economy that enables everyone to flourish and that will set Victoria on a path to low-carbon prosperity.

Victoria 3.0 includes three main goals:

1. An immediate focus on supporting businesses to adapt to a new normal and become more resilient considering lessons learned during the COVID-19 pandemic
2. Creating a city and an economy that is inclusive of everyone
3. Building a sustainable economy over the next two decades which aligns with the City's Climate Leadership Plan and creates a pathway to low-carbon prosperity

To ensure that Victoria 3.0 would focus on the right issues and metrics that would set the city up for success, the first step in developing the plan was to research other global cities. The City with other funding partners engaged "The Business of Cities" an urban intelligence firm that works with more than 100 cities and companies worldwide each year. "The Business of Cities" help global cities and businesses to work together, find and learn from each other, and adopt strategies and tools to achieve their goals. An executive summary with full report (Appendix A) examine the Greater Victoria region under three areas of focus: Benchmarking Victoria's Economy, Case Studies – Learning from International Experience, and Victoria's Global Fluency.

Building on research findings, sector specific roundtables were held in the fall of 2019. The Ocean Futures & Innovation Hub, Big Idea (Arts & Innovation District), and Business Support working groups were also created. Participants from the roundtables joined the working groups and

contributed their time and insights to help drive forward key action items. This speaks to the commitment of community partners and business leaders city wide to collaborate and the shared responsibility to shape and achieve the vision of Victoria 3.0, for the city to be a future-ready, globally-fluent influencer and innovator.

Victoria 3.0 was adopted by Council on May 14, 2020 and includes 10 categories and 69 action items to be delivered between 2020 to 2026. This document outlines the completed or partly completed 16 action items achieved within the first year. As well, updated 2021 action items with a request for $117,000 from the Financial Plan contingency to support the initial planning towards an Arts & Innovation District, and future action items.

PURPOSE

The purpose of this report is to provide Council with a progress report on the action items achieved to date, updated 2021 action items and future action items, and to request $117,000 from the Financial Plan contingency budget to support the initial planning towards an Arts & Innovation District.

BACKGROUND

In 2019, City staff hosted six sector specific roundtables where 145 residents and business owners participated. At each roundtable, a proposed vision for Victoria 3.0 and the future of our economy was presented. Participants were asked for their input based on their experience doing business in the city and their aspirations for “global fluency”. The draft plan was released in January 2020 and public input was received through an online survey.

In March 2020, just as Victoria 3.0 was scheduled for Council’s consideration, the pandemic arrived placing the plan on hold and requiring staff to reposition the plan focussing on Recovery, Reinvention, and Resilience. Another round of engagement with business leaders helped to refine Victoria 3.0 to support businesses through the pandemic and beyond.

Recovery has focused on the small business sector in our local economy which has faced significant impacts due to the pandemic including serious revenue shortfalls and staff layoffs. Actions outlined under “Recovery: Our Small Businesses are the Lifeblood of Our Economy,” are to provide immediate support to small businesses, including newcomer and Indigenous-owned businesses and youth to assist businesses to weather the pandemic and position for future recovery. The Build Back Victoria program and the COVID-19 Business Resource page were two immediate actions that positively impacted and supported business.

Reinvention and Resilience focuses on building on Victoria’s strengths and reinventing Victoria to meet the challenges and seize upon opportunities in preparation for the 22nd century. Action items focus on developing a stronger innovation ecosystem and building on our strengths as an ocean city while also creating low-carbon prosperity. Two primary actions include launching an Ocean Futures Cluster and Innovation Hub and building an Arts & Innovation District.

ISSUES & ANALYSIS

Victoria 3.0 includes two key areas for implementation of Recovery, and Reinvention and Resilience. Since adoption by Council in May 2020, staff and community partners have been able to complete or partly complete 16 of the 69 action items. The following sections provide action items completed to date, 2021 action items underway and larger initiative updates for Council’s

information.

Recovery: Our Small Businesses are the Lifeblood of Our Economy

The following action items have been completed or partly completed:

1. Develop a “How to Adapt to a New Normal” toolkit based on WorkSafeBC sector guides
2. Develop an “Emergency Resilience” toolkit for Business
3. Create opportunities for restaurants and retailers to do business in public space
4. Create more space for pedestrians downtown and in village centres to meet physical distancing requirements
5. Develop a Welcoming Cities Strategy
6. Undertake a Feasibility Study for the Victoria Conference Centre

As soon as COVID-19 was declared a pandemic, the Mayor initiated a weekly business support call with representatives from the Downtown Victoria Business Association, Destination Greater Victoria, Think Local First, Community Micro Lending, Victoria Innovation Advanced Technology & Entrepreneurship Council, Chamber of Commerce, the South Island Prosperity Partnership, and several small business owners to understand how the City could support small business. These weekly calls informed the City’s COVID-19 Business Resource page to help businesses safely re-open, ways to support our local economy, and more information regarding relief programs through federal, provincial and local channels. These calls are now held biweekly and continue to inform Victoria 3.0 implementation.

Build Back Victoria launched in June 2020 and provided temporary initiatives for businesses to expand their operating capacity into public space (parks, sidewalks, streets, boulevards) in line with public health recommendations for physical distancing and while maintaining the accessibility and liveability of our streets and sidewalks. This also aligned with the Provincial Liquor Board licencing expansion for liquor sales and service in public space. This program has been widely successful with participants across several business sectors and locations throughout the City and will continue until at least October 2021.

To support newcomer businesses, a Welcoming Cities task force was initiated in November 2020. Work is underway and public engagement will begin in mid-May to seek input on how Victoria can align with the international Welcoming Standard, which includes a focus on employment and economic inclusion. Specifically:

- Assist immigrant job seekers with information, training, and networking.
- Support immigrant entrepreneurs and business owners in starting, building, and growing their companies.
- Engage local employers and chambers of commerce to create welcoming, equitable and safe work environments.
- Plan for inclusive economic development and integrate welcoming into existing economic development efforts.
- Build financial knowledge and skills in the immigrant community.
- Support immigrant workers through education on workplace rights and legal advice on workplace issues.

A report to Council with a proposed strategy is expected in September.

Recovery: 2021 Action Items

Council directed staff to report back on Victoria 3.0 actions outlined as deliverables for 2021 (Appendix B). However, due to the ongoing pandemic, a meeting was held with business leaders to discuss the proposed actions and to determine feasibility of each item. Feedback included an immediate focus on the incumbent businesses who are still 'hanging on' and to delay the retail strategy until later in 2021 or early 2022. Input also included relaunching the ShopYYJ campaign that includes businesses promoting to shop and dine locally, the vibrancy and vitality of downtown, and our own success stories. As a result, our action items for 2021 have been adjusted to focus on the following priorities:

- Downtown Clean & Safe Committee / Downtown Ambassador Program
- Relaunch the ShopYYJ buy local campaign
- Build Back Victoria Program – promoted through print & social regarding the continuation of the program
- 'Cut the Red Tape' workshop to discuss the best and most efficient ways for the City to support business
- Mitigation Strategy to improve communication and support businesses that are impacted by development.
- Retail Strategy to be reviewed in T3 2021 on timing to engage consultant to undertake this work.

Workplan or resource impacts of COVID-19

Destination Greater Victoria, as the sales and marketing partner for the Victoria Conference Centre (VCC), contracted CBRE to conduct a convention business growth potential and feasibility study, which was completed in September 2020. Tourism, and particularly the conference industry, has been devasted by the impacts of COVID-19. The study estimated that following post-COVID recovery there would likely be potential to increase the number of events hosted at the VCC as well as their size (number of delegates) and duration (delegate days), subject to expansion and reconfiguration of the facility. It is anticipated that recovery trends will become evident during 2022 and, given lead times for planning, the feasibility study should be revisited in fall 2022.

Victoria 3.0 envisioned additional staffing capacity to support implementation. The Business Ambassador has been fully committed to managing the Build Back Victoria program and the Head of Business & Community Relations has the responsibility of overseeing the Economic Development, Victoria Conference Centre, Arts Culture & Events and Neighbourhoods divisions without a manager or administration support. Additional staff capacity will be required to achieve all the action items in the plan and to support economic recovery and economic inclusion. As part of the 2022 Financial Plan, staff will propose an additional staff position for Council's consideration.

Reinvention and Resilience: Building a Strong and Resilient Local Economy

The following action items were completed or partly completed since adoption of Victoria 3.0:

Create an Ocean Futures Cluster

1. Create an Ocean Futures Cluster Task Force to develop a strong value proposition and Cluster implementation
2. Develop a Business Case and Value Proposition

3. Champion the Ocean Futures Cluster and Innovation Hub with Provincial and Federal governments
4. Develop a Governance Structure for Cluster Implementation

The action to develop an Ocean Futures Cluster and Innovation Hub (OFCIH) will help build on all the ocean and marine-related businesses and major assets in our city and region. This action aims to grow existing enterprises and attract new ones where the resulting products, services, technology, know-how, and intelligence support the arc that leads to sustainability and climate changes mitigation and adaptation. It will help our region and Canada to achieve UN Sustainable Development Goal 14: "Life Below Water – conserve and sustainably use the oceans, seas and marine resources for sustainable development."

A business case working group was formed in early June 2020 that included the City, the Association of British Columbia Marine Industries, Ocean Networks Canada, Open Ocean Robotics, South Island Prosperity Partnership (SIPP), Province of BC, Ralmax Group of Companies and the Centre for Ocean Ventures & Entrepreneurship in Halifax to create a request for proposals for a feasibility and business case for an OFCIH. Through a funding application to Western Economic Diversification, the partners secured $100,000 for this work. The contract was awarded to Urban Systems and the business case was completed in September 2020 (Appendix C).

Since the completion of the business case, this work has transitioned to SIPP and the project is now called the Centre for Ocean Applied Sustainable Technologies (COAST). COAST is a stand alone non-profit with a governance structure and interim board created to lead the work of a cluster and innovation hub.

<u>Learn from Other Cities – The Business of Cities</u>

1. Measure the City and region against 10 Traits of Globally-Fluent Metro Areas
2. Research policies and best practices needed to get us from where we are (largest source of jobs is service and public sector) to where we want to go (balance of public sector and high-value private sector jobs)
3. Undertake case studies on other cities/regions
4. Determine comparator cities; assess how we rank in comparison to other small, high-performing, high-calibre cities
5. Gain insight on advance key projects; Innovation District, Ocean Futures Cluster, Attracting a post-secondary institution to partner in downtown Victoria
6. Develop a measurement framework to track progress over time. How many high-value jobs created? How globally fluent? How many spin-offs from Ocean Futures Cluster and Innovation District?

The City partnered with the British Columbia Investment Management Corporation (BCI), SIPP, and Aryze Developments to contract The Business of Cities to conduct an analysis of Greater Victoria's economic potential. The consultant team conducted a study of best practices from other global cities to learn from other cities and incorporate learnings to guide Victoria to prepare for the challenges and opportunities of the 22nd century. Small city regions will be an important part of the global landscape in the coming decades; city regions like Victoria need to increase their global fluency or risk being left behind as unaffordable, unsustainable and low-value.

The analysis and research prepared by The Business of Cities was carried out over several months and included regular meetings with the funding partners (City of Victoria, BCI, SIPP, and Aryze)

and was also informed by focus group discussions with several of Victoria's business leaders under different categories such as Post-Secondary Presidents, High-Value Economic Transition, Eco-system Development, Inclusive Economic Development, and the Ocean Cluster & Innovation District.

The City will continue to be informed by the Business of Cities analysis and research, but the broader regional development actions will be led by SIPP.

Re-Do Victoria's Brand and Story

Although this was proposed in Victoria 3.0 as a 2023-2026 action, this work is underway on a regional basis through the South Island Prosperity Partnership as work arising from the Rising Economy Task Force. Many of the task force subcommittees identified the need to tell our new story as a key element of post-pandemic recovery. This resulted in "Tell Our New Story" as a key pillar of recovery in the region's Reboot Plan. The Reboot plan notes that "The post-COVID-19 world will embrace smaller cities that are highly liveable, agile, connected, competent, healthy, compact, innovation hungry and future-ready. Greater Victoria already has many of the strengths that are fundamental for recovery." SIPP is leading this multi-month process and there will be opportunities for engagement for the City, residents and businesses.

Arts & Innovation District

In early 2019 the Mayor invited leaders to discuss a 'Big Idea' precipitated due to a parcel of land (Capital Iron lands) that would soon be available. The meeting was to discuss the viability to create a location for new office space for the technology industry, a downtown university space, a potential downtown library, office space for the BC public service, and other important community amenities.

The 'Big Idea' became the Arts & Innovation District (District). As described in Victoria 3.0, the District is proposed to be a hub of cross-sector collaboration, a place where research and development lead to ideas that are commercialized (turned into products and services), where new high-value, future-oriented jobs are created and where Victoria's arts and culture sector can continue to flourish. It will be a global facing and export-oriented district to attract companies that embrace and address the challenges of the 22nd century with a focus on low-carbon prosperity. It will be an amenity-rich place where small businesses and artists thrive and benefit from the concentration of economic activity.

The location initially started with a focus on the Capital Iron lands, but soon grew to include a larger area at the north end of downtown which will accommodate future key employment uses. The area is currently a mix of heavy and light industry, commercial, retail, surface parking lots, recently remediated land owned jointly by the Songhees and Esquimalt Nations, craft brewers, and artists and makers.

For this work to move forward, the next phase requires a planning and city-initiated rezoning process that is both visionary and grounded in strategies and key considerations that support the vision and objectives for the District. This includes a focus on employment and ensuring that the policies and regulations are economically viable and attract investment, while maintaining affordable space for light industrial uses, artists and creatives.

In addition, with the objective of creating more housing opportunities without compromising job space and economic development objectives in the heart of the Arts and Innovation District, the eastern boundaries of the District have been expanded to incorporate the adjacent area between

Douglas and Blanshard streets. This area is currently envisioned by the Downtown Core Area Plan and Official Community Plan to accommodate future residential development; however, the planning process provides an opportunity to consider a more diverse range of housing opportunities to support the Arts and Innovation District, as well as exploring opportunities to add arts and employment uses east of Douglas Street.

Because there are development pressures now and a desire for more specific planning for the district to contribute in the coming years to Victoria's economic recovery and future, a two-phase process is proposed. First, a Kick-Off Phase beginning in 2021, should Council approve this budget request for $117,000, followed by completion of a master plan for the district if resources are made available through the 2022 budget process or other funding opportunities.

The Kick-Off Phase will include two studies which are foundational for understanding the economic viability of different development types:

1. The market potential of the district to support space for various sectors.
2. The environmental constraints of the district.

This initial work would be followed by direction-setting with key stakeholders through a series of sector-based focus groups, followed by a focused "Ideas Fair" workshop facilitated by a multi-disciplinary team including City staff and supporting planning and urban design professionals. The workshop would be grounded in the findings of these studies and the needs of the various sectors. This process would seek to set key directions that support the vision and key objectives for the Arts and Innovation District, in a way which is economically viable and protects and expands the employment sector in this area.

Throughout this work, a strong focus will be on building partnerships both locally and more broadly. Opportunities for collaboration are being explored including with the United Nations Urban Economy Forum and CMHC.

These key directions would then set the stage for a second planning phase to identify policies and approaches for land use, urban design, public space, and mobility that support the key objectives, as well as implementation strategies, considerations for zoning regulation updates and potential partnerships. As noted above, this second phase would require future funding, which staff will consider bringing forward as part of the 2022 budget process for Council's consideration and will also seek Council direction to pursue external funding.

OPTIONS & IMPACTS

Option 1: That Council approve $117,000 from the 2021 Financial Plan contingency budget to support the initial planning for an Arts & Innovation District, and that the second phase of funding be considered in the 2022 budget. *(Recommended)*

Under Option 1, staff would initiate a process in 2021 to undertake two studies: a land economics and market potential study, and a high-level review of existing environmental conditions to identify possible constraints on the district. This would be followed by a round of focus groups with key sectors interested in the future of the district and a workshop setting directions for the planning process.

This option allows for the planning of the Arts & Innovation District to be initiated within the 2021 workplan. This preliminary work would allow City staff and stakeholders to better understand the economic prospects and constraints of the district, and to begin establishing a framework and plan to guide future development to support Victoria 3.0 Objectives.

Option 2: Delay the Kick-Off Phase and consider the Arts and Innovation District planning proposal as part of the 2022 budget.

Under Option 2, the kick-off phase would not be able to move forward in 2021, unless funding is secured through other sources. Preliminary planning for the area is dependent on understanding the economic realities and constraints of this District; therefore, under this option, further planning for the Arts & Innovation District would be delayed until funding can be secured. This means timeframes outlined in *Victoria 3.0* would be delayed.

Accessibility Impact Statement

There are no impacts to accessibility.

2019 – 2022 Strategic Plan

Strategic Objective #4 – Prosperity and Economic Inclusion; Create Victoria 3.0 – Recovery Reinvention Resilience – 2020-2041 Economic Action Plan

Impacts to Financial Plan

Should Council approve Option 1, the $117,000 would be allocated from the contingency budget within the 2021 Financial Plan. The remaining balance in the contingency budget is $598,620.

Official Community Plan Consistency Statement

The actions outlined in Victoria 3.0 are consistent with the goals in OCP Section 14 - Economy.

- 14 (A) Victoria generates economic growth through innovation, entrepreneurship and business formation, and attracts and retains sustainable enterprise well-suited to the region.
- 14 (B) Victoria contributes to global knowledge, produces and attracts talented researchers, incubates innovation, and brings new goods and services to market.
- 14 (C) Victorians have the knowledge and abilities to support a vibrant regional economy and the capacity to creatively adapt to economic change.
- 14 (D) Victoria is the headquarters of the Provincial Government, a premier tourism destination and a gateway to Vancouver Island.
- 14 (E) A broad range of employment opportunities exist across the city and region providing workers with income to financially support themselves and their families.

CONCLUSIONS

One year on, Victoria 3.0 has delivered on several action items providing immediate support to businesses impacted by COVID-19 and significant action items to ignite economic recovery in the future. Staff look forward to working closely with business leaders, community partners and organizations to continue delivering the actions set out in Victoria 3.0.

In support of the Arts and Innovation District, it is recommended that Option 1 be supported. This would allow preliminary planning for the area to be initiated in 2021 and make progress towards the vision for the Arts and Innovation District as outlined in *Victoria 3.0*, in anticipation of future development pressures and as part of Victoria's economic recovery.

Respectfully submitted,

Kerri Moore
Head of Business & Community Relations

Quinn Anglin
Business Ambassador

Report accepted and recommended by the City Manager

List of Attachments

Appendix A: The Business of Cities Report
Appendix B: Financial Plan Motions - Report Back
Appendix C: Ocean Futures Cluster & Innovation Hub - Business Case
Appendix D: Arts & Innovation District Map

The Business Of Cities

May 2021

Greater Victoria's Next Chapter

A Series of Special Reports on Shaping the Future of Our Regional Economy

SOUTH ISLAND PROSPERITY PARTNERSHIP

CITY OF VICTORIA

BCi

ARYZE

Acknowledgements

These reports were produced by The Business of Cities and commissioned through funding support from South Island Prosperity Partnership, the City of Victoria, BCI and Aryze Developments. The content was generated through extensive research — both locally and internationally — and included several focus groups involving a cross-section of business and community leaders from across Southern Vancouver Island. Project partners would like to acknowledge the valuable contributions of these focus group participants.

While these reports are designed to spell out why our region must respond now to create the future we want, it's also essential to recognize the history that brought us to this point. This includes acknowledging the impacts of our colonial past on these traditional territories of the Coast Salish Peoples and the legacies of this history that necessitate meaningful reconciliation with First Nations and Indigenous peoples. We respect and, in partnership, desire to work with First Nations in building this collective future together.

How to Navigate these Reports

Executive Summary

An introduction to the work of The Business of Cities in benchmarking Greater Victoria's global fluency and the region's pathways to opportunity.

REPORT 1

Global Benchmarking

This report provides an initial international benchmarking comparison of Greater Victoria's economic performance and prospects.

REPORT 2

Case Studies in Transformation and Change

This report looks at more than 20 small- and mid-sized city-regions around the globe, with examples relevant to Greater Victoria's journey to global fluency.

REPORT 3

Greater Victoria's Global Fluency

This report lays out a path to becoming a globally fluent region — and the phases of evolution.

Introduction

A Time **for Action**

The idea for this research was conceived in early 2020, in response to growing recognition that Greater Victoria's economy is entering a new chapter.

Even before COVID-19, Greater Victoria leaders had begun a process — initiated by South Island Prosperity Partnership, the City of Victoria, BCI and Aryze Developments — to reflect on how the region can capitalise on the rise of a more distributed innovation economy and the shift from big metropolises to smaller regions that have distinctive appeal, amenities and resilience.

These stakeholders were motivated by concerns that if the region does not pivot to innovation-intensive industries and become more magnetic, it will lose out on the next cycle of good jobs that drive prosperity, underpin quality of life, and renew the buy-in and confidence of future generations of South Islanders.

COVID-19 has brought this context into even sharper relief. A reset in what people want from cities is coming into view alongside newly exposed risks for cities that are unequal, under-prepared, and complacent. A window of opportunity has emerged for Greater Victoria — if the region wants it — to emerge on the international stage and find its path to a sustainable future.

Throughout 2020, The Business of Cities undertook **a three-part detailed and original analysis on behalf of the region, to assess the region's attributes and aspirations through a global lens.** We drew on our experience working with regions around the world such as Oslo, Sydney, Barcelona, Philadelphia, and Malmö to explore Greater Victoria's path and potential in the years ahead. Our work was further enriched by dialogue with many South Island leaders. The three reports launched here reflect the outcome of this work.

Benchmarking the **Region's Progress**

Understanding the region's future prospects firstly depends on knowing where it really stands in an international context. Our assessment began with a first-of-its-kind benchmarking comparison of Greater Victoria against its real peers in the areas that are known to matter over the long-term (Report 1). The work identified an immediate 'peer group' of 10 city-regions — including Aarhus, Denmark and Hobart, Australia — as well as a second group of cities further along in their journeys, such as Helsinki, Finland and Christchurch, New Zealand.

This benchmarking indicates Greater Victoria possesses advantages that set it apart not just nationally but globally: an exceptional environment, low pollution, special access to nature, lower crime, superior healthcare, and quality education, all delivered within a region that is, for now, more compact and easier to get around than many.

Yet the benchmarking also reveals that other cities and metropolitan regions do better at consistently attracting and retaining younger workers, and have more of the urban fabric, infrastructure, and concentration necessary to support it. Less affordable housing and fewer large anchor firms than other peer regions are clear constraints. The evidence suggests that despite promising industry specializations, innovation outcomes do not yet match the region's entrepreneurial spirit and innovation infrastructure.

The Urgent Risks of Inaction

These gaps have become more urgent in a context where homes are getting more difficult to afford, people are getting older, and the jobs market has become more divided between winners and losers. The risk is that Greater Victoria goes the way of other cities that treated growth as an opponent of inclusion, failed to reinvest in the things that made the city great, and so eventually lost jobs, families and opportunities to other cities.

The indicators point to a clear risk — the potential for economic contraction resulting in new high-value jobs not being created to replenish the previous generation of good jobs.

> *Without more decisive moves, Greater Victoria may slowly and steadily become locked in to a development path that is medium-productivity, low-affordability, low-amenity, and vulnerable to future shocks.*

International **Inspiration**

Knowing where and how to shift onto a new path toward the right kind of growth and a more productive future requires the inspiration that good examples from around the world can provide.

And so, in the second phase of work, we explored more than 20 examples from around the world where smaller city-regions have shifted purposefully into a new gear after a period of crisis or transition **(see Report 2)**.

From Christchurch's earthquake recovery to Miami's diversification from tourism, and from Auckland's innovation district to Amsterdam's reorganized economic leadership, a number of common themes emerge:

- **a reimagined Downtown**
- **enhanced coordination between public and private sectors**
- **confidence and conviction to host the world**
- **making the most of knowledge-rich institutions**
- **vigilance about the reforms needed in future**
- **the need to address diversity, inclusion and climate change.**

These themes are all fostered by a shared language for success and groups of agile leaders willing to move quickly.

Towards **Global Fluency**

How can Greater Victoria build and sustain its own fresh versions of these approaches to its economy, its development, its talent, its people, and its environment, both now in the aftermath of COVID-19 and into the future?

Much depends on the 'fluency' of the region — to read, listen, and engage in global markets, build relationships and develop the instincts to adapt in new scenarios. It means turning accidental success into intentional planning, positioning and investment.

In **Report 3**, we explore the essential traits of this global fluency (an idea first developed with the Brookings Institution). We observe which traits Greater Victoria already has and should use — and which it now urgently needs in order to pivot to what the future demands of it.

10 Traits
of Globally Fluent **Metropolitan Areas**

1. Leadership with a Worldview	Local leadership networks with a global outlook have great potential for impact on the global fluency of a metro area
2. Legacy of Global Orientation	Due to their location, size, and history, certain cities were naturally oriented toward global interaction at an early stage, giving them a first-mover advantage
3. Specialisations with Global Reach	Cities often establish their initial global position through a distinct economic specialisation, leveraging it as a platform for diversification
4. Adaptability to Global Dynamics	Cities that sustain their market positions are able to adjust to each new cycle of global change
5. Culture of Knowledge and Innovation	In an increasingly knowledge-driven world, positive development in the global economy requires high levels of human capital to generate new ideas, methods, products, and technologies
6. Opportunity and Appeal to the World	Metro areas that are appealing, open, and opportunity-rich serve as magnets for attracting people and firms from around the world
7. International Connectivity	Global relevance requires global reach that efficiently connects people and goods to international markets through well-designed, modern infrastructure
8. Ability to Secure Investment for Strategic Priorities	Attracting investment from a wide variety of domestic and international sources is decisive in enabling metro areas to effectively pursue new growth strategies
9. Government as a Global Enabler	All levels of government have unique and complementary roles to play in enabling firms and metro areas to "go global"
10. A Compelling Global Identity	Cities must establish an appealing global identity and relevance in international markets not only to sell the city, but also to shape and build the region around a common purpose

Source: The Brookings Institution (2013). The Ten Traits of Globally Fluent Metro Areas.

While the region does undoubtedly benefit from liveability appeal, pockets of forward-looking leadership, advantageous proximity to the Pacific and to the rest of Cascadia (including major metros like Vancouver and Seattle), and credibility as a centre for knowledge and tourism, these are insufficient by themselves for the region to achieve its goals. In other words, the region cannot expect to rely in perpetuity on its serene quality of life, entrepreneurial endowment, and 'safe haven' attributes. This third report observes the fluency gaps, relative to what others with similar starting assets have achieved: lower international profile, propensity to engage globally, institutional cooperation, and scale in advanced technological industries.

International experience suggests that the alternative is a future where the region's cherished strengths will be progressively eroded and undermined--with large costs and missed opportunities.

> ***Becoming more globally fluent is not some distant dream or impractical ideal. It is essential to deliver prosperity and life chances to the next generations of South Islanders.***

Values and **Quality-driven Growth**

Taking global fluency seriously for Greater Victoria will mean addressing immediate priorities while also gaining momentum and confidence around longer-term agendas.

These longer-term agendas consider the desirable quality of economic growth (i.e. inclusive, clean and innovative) that corresponds to the region's values.

These include a larger innovation economy and more magnetic districts underpinned by better placemaking, multi-modal mobility and climate action. Bold re-imagination and a spirit of endeavour are needed to proactively make progress and use the region's assets with more intentionality.

To accomplish this, there is a major advantage that the region has already in place: a regional public-private alliance in the South Island Prosperity Partnership SIPP). Effective governance and building leadership capacity to act will be a top agenda for SIPP going forward. Setting the agenda for quality development that aligns to societal values for equity, inclusion, and environmental sensibility — and strategy to achieve — it requires the all-hands-on-deck approach that SIPP represents.

> *Bold re-imagination and a spirit of endeavour are needed to proactively make progress and use the region's assets with more intentionality.*

The Story to Be Told

Most of all, in a decade likely to be scarred by fiscal, political and environmental turbulence, these three reports highlight that Greater Victoria now needs to differentiate itself. The region requires a more memorable international reputation among more audiences, and a stronger business brand to match its excellent resident and visitor brands. This depends on a unifying story about what the region stands for and where it is going.

> *The new order of city-regions is being shaken up. Greater Victoria can become a reference point for what people want from a 21st-century metropolitan city...*

This pursuit does not mean sacrificing local character or ignoring local needs: quite the opposite. Instead, it means future-proofing what makes Greater Victoria special. It is the vehicle to galvanize the region around bigger ideas and quality growth.

Over the coming months, SIPP will be developing and rolling out a project called "Telling our New Story," which will turn the ideas for a new story into a programme for execution. SIPP initiated this work through six focus groups in January 2021 featuring leaders in the following sectors:

- **digital transformation**
- **clean tech and green economy**
- **ocean and marine**
- **creative (from artists and designers to dance companies and musicians).**

Much more local engagement is to come to shape this. International perspectives will also continue to inform this storytelling and uncover new strategic approaches. International benchmarking centred on the economics of people, planet and prosperity will, for example, feature regularly within SIPP's annual Prosperity Index.

Everyone has a role to play in telling the story and fulfilling it. Civic and business leaders can step up, use their voices, grow their presence in some of the key agendas, and explore how they can work better together for the benefit of the region. Science and research can build up and project the story of discovery and invention. Governments can provide the interventions and investment to bring the story to life.

In every region that has learned to tell its story differently, citizens have a fundamental role to play. Greater Victoria is no different. Everyone who lives, works and enjoys the region can participate in distilling what is unique about it, promote it in their networks, and in so doing help to unite the region through a common purpose, and position Greater Victoria for new, unseen opportunities.

Far from eliminating the rich differences of perspective and opinion, this process helps to identify Greater Victoria's shared, multi-layered identity. The crowdsourcing of stories, the shared access to key materials, the mapping and FAQs about different aspects of the region, and the nomination of ambassadors, are all set to be part of the next phase of collective storytelling.

The new order of city-regions is being shaken up. Greater Victoria can become a reference point for what people want from a 21st-century metropolitan city: connection, competence, civility, compactness, community, careers, cohesion and creativity. These reports provide an initial evidence base and resource to a region now looking with optimism to serve its people by reinvesting in their shared future. reinvesting in their shared future.

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The Business Of Cities

The Business of Cities is an urban intelligence firm that works with cities and companies worldwide. It uses advanced benchmarking and comparative analysis to help leaders to respond purposefully to the twin dynamics of urbanisation and globalisation. Over the last 10 years it has supported public and private leadership in cities and regions such as Amsterdam, Auckland, Glasgow, Helsinki, London, Oslo, Philadelphia, San Diego, Sydney and Tel Aviv, and collaborated closely with international organisations such as the OECD, World Bank and Brookings Institution.

The authors of this paper are **Dr. Tim Moonen**, **Jake Nunley**, **Borane Gille** and **Benjamin Gowers**.

The authors would also like to thank **Laure Wassen** and **Ben Gowers** for their contributions.

The Business Of Cities

Report 1
May 2021

Global Benchmarking

Putting Greater Victoria's Economy in International Perspective

SOUTH ISLAND PROSPERITY PARTNERSHIP

CITY OF VICTORIA

BCi

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Executive summary

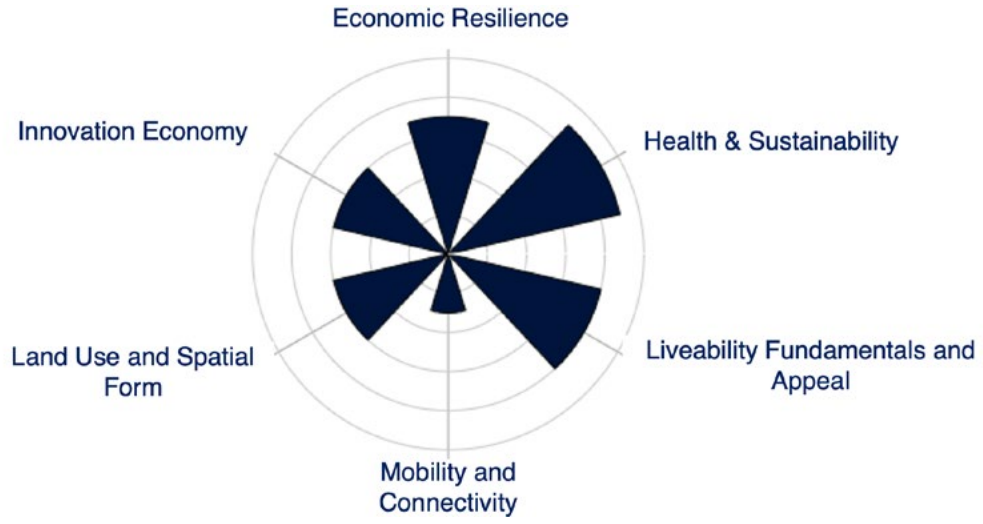
This report, commissioned by South Island Prosperity Partnership (to aid the regional economic development strategic planning process), the City of Victoria (to aid the "Victoria 3.0" planning process), and Aryze Developments and BCI, provides an initial international benchmarking comparison of Greater Victoria's economic performance and prospects.

It draws on a variety of comparative performance and perception data that are important to the long-term growth and success of smaller city-regions, in order to provide Greater Victoria[1] with an 'outside-in' global perspective of its opportunities, imperatives and constraints.

One of this report's innovations is that it evaluates Greater Victoria against a 'peer group' of cities with whom it shares attributes, and a second group that are larger and further along their journey of high value economic transition and which Greater Victoria can aspire towards in the next cycle. This second group includes a mixture of world-class standard setters (e.g. Helsinki and Eindhoven), specialized secondary cities (e.g. Aarhus and Vitoria-Gasteiz), and improving nimble cities (e.g. Cork and Christchurch).

Performance outcomes

International benchmarking suggests that in 2020 Greater Victoria already had a number of critical ingredients to underpin a successful growth and productivity-raising cycle. Greater Victoria is already by many standards a high performing region. It has (to an extent unintentionally) become one of the world's most liveable small city-regions, and now possesses enduring advantages that continue to set it apart: an exceptional environment with low pollution and high access to natural and lifestyle assets; a lower crime rate, a more efficient healthcare system and a more highly educated population than many of its peers. Currently Greater Victoria is also able to deliver this liveability advantage within a relatively compact region setting, with shorter commute times and fewer externalities associated with car dependency.



Spidergram summary of Greater Victoria's performance compared to global peers

Source: The Business of Cities research. Based on use of an ELO algorithm to compare regional performance across multiple indicators against nominated peer regions. See appendix for details.

COVID-19 provides Greater Victoria with a rare and unusual window of opportunity to accelerate a transition to a more innovative and productive economy. By international standards Greater Victoria already has promising industry specialisations, a capable cadre of technology-based firms, and an established culture of entrepreneurship. Greater Victoria's rapid response to COVID-19, ability to accommodate remote working, and proximity to the United States market during a period of fiscal and political turbulence, all create a context in which the region can now foster a higher calibre of jobs, talent and opportunity. If it can do so Greater Victoria will be much better placed to withstand the medium-term shocks and longer-term changes triggered by the pandemic.

But a successful move towards a higher-value, more resilient economy will also require Greater Victoria to proactively address key gaps. The benchmarking has revealed that other smaller city-regions that have accomplished this transition more consistently attract and retain younger workers to participate in a more diversified economy, and have more of the urban fabric, infrastructure, and concentration necessary to support it. Greater Victoria is more dependent on the public sector as an economic and jobs driver than other peer regions. It has produced fewer high-growth technology companies that can catalyse a wider ecosystem, and the evidence suggests that innovation outcomes do not yet match the region's entrepreneurial spirit and innovation infrastructure. Specialisms in advanced digital and maker sectors are still fairly small and purposeful clustering is not as established. Less affordable housing and fewer large anchor firms are two reasons for fewer younger people than among its peer regions.

Most indicators are bright for Greater Victoria, but the region has to act decisively to address its deficits, or the risk is that it will miss the chance to transition to a high-productivity, high-opportunity, high-interaction and high-amenity economy. Without a much larger innovation economy, more strategic anchor institutions, more magnetic commercial hubs, and improved urban placemaking underpinned by a stronger physical and spatial platform, there is a risk that Greater Victoria will be unable to reproduce and reinvest in the lifestyle ingredients that make the region so compelling. Greater Victoria may gradually become locked in to a development path that is medium-productivity, low-affordability, and vulnerable to future shocks.

The journey for Greater Victoria

Greater Victoria is entering an exciting but turbulent decade. Looking ahead to the recovery and the next cycle as it starts to take shape, the benchmarking data indicates that Greater Victoria may need to carefully consider:

- maximizing the potential of the innovation district by ensuring close coordination between landowners, local growth partners and place advocates in order to create an amenity-rich and high-quality place that creates a new level of visibility, co-location and specialisation
- increasing the population density of Downtown and the region's core in order to drive innovation and visibility, and deliver the agile urban environments fit for the post-COVID-19 generation
- making the most of anchor institutions, and the potential for greater proximity and spillovers with other key businesses and institutions to spur commercialisation
- monitoring and investing in the physical and digital infrastructure platforms necessary to connect and serve an agile regional economy and catalyse other positive changes.
- paying close attention to how it uses its edges to build a sharper and more memorable international reputation among more audiences, and a stronger business brand to match its excellent resident brand, all underpinned by a unifying story about Greater Victoria's past, present, and future.

The policies and approaches other regions have adopted in these areas are the subject of **Report 2**.

Introduction

This paper was commissioned in Spring 2020 to provide an independent background investigation on Greater Victoria's competitive strengths and weaknesses in their global context. It is designed as part of a programme of work by The Business of Cities to support six actions specified in Victoria 3.0 (but also carrying it forward into regional economic development strategy through South Island Prosperity Partnership):

9.1 Measure the City and region against 10 Traits of Globally Fluent Metro Areas

9.2 Research policies and best practices

9.3 Undertake case studies on what cities/ regions have done with respect to SME innovation, R&D commercialisation, First Nations economic reconciliation, and recovery from crises.

9.4 Determine comparator, high-performing, high-calibre cities

9.5 Gain insight on advancing key projects

9.6 Develop a measurement framework to track progress over time.

This report provides specific insights on points 9.4 and 9.6, in Victoria 3.0, drawing on The Business of Cities' experience of comparative city and regional performance to provide a distinctive and customised benchmarking analysis that:

- compares Greater Victoria to a small 'peer group' of international locations with similar size, assets and relationships within a wider urban region.
- identifies the comparative strengths, gaps, and opportunities that can make Greater Victoria more internationally competitive.

This paper builds on the premises that Greater Victoria is a region that:

- is experiencing an important cycle of population growth, change and economic diversification and disruption, which takes on a new hue amid the effects of COVID-19.
- has inherited a distinct island character with a special lifestyle proposition, exceptional natural assets, and a lower density and less intentional model of urban development.
- has the potential to establish itself as a niche region that hosts high value-added activities to the benefit of BC, Canada and the world.
- may need new approaches to optimise its participation in the innovation economy and become a clearer hub within the dynamic Pacific NorthWest region. [1]

What this paper is not

There are sometimes confusions about the origins and purposes of city and regional benchmarking. This particular work has NOT been designed as:

- an inside-out analysis of all of Greater Victoria's economic, sectoral and fiscal evolution data.
- an all-purpose assessment of Greater Victoria's strategies, governance, fiscal or policy models.
- a recommendation of new policies that Greater Victoria should adopt.
- a statistical comparison of Greater Victoria's brand and perception, and how that compares with the region's performance.

Instead, this paper presents an 'outside in' analysis of Greater Victoria's current performance relative to comparable international 'peers', using available data that are robust and relevant enough to compare cities and regions internationally, across a series of strategic themes relating to the City of Victoria's current priorities and ambitions as outlined in Victoria 3.0 (see below).

1. Economic Resilience
2. Innovation Economy
3. Land Use and Spatial Form
4. Mobility and Connectivity
5. Liveability, Amenities and Appeal
6. Health and Sustainability

Identifying Greater Victoria's peers

Understanding and tracking peer regions is an important task for globally aspiring regions. For Greater Victoria, it can help to:

- monitor progress, and spot areas of relative improvement and decline
- set meaningful targets and thresholds
- engage and educate stakeholders locally
- track Greater Victoria's journey towards high value economic transition.

In the following sections we benchmark Greater Victoria's performance among a carefully selected group of 18 similar 'peer' cities globally (see Figure 1).

These peers consist of two groups:

- a 'core' peer group, with whom Greater Victoria shares many attributes now.
- a 'wider' peer group, composed mostly of slightly larger regions that have successfully acquired some or most of the ingredients of a high value economy.

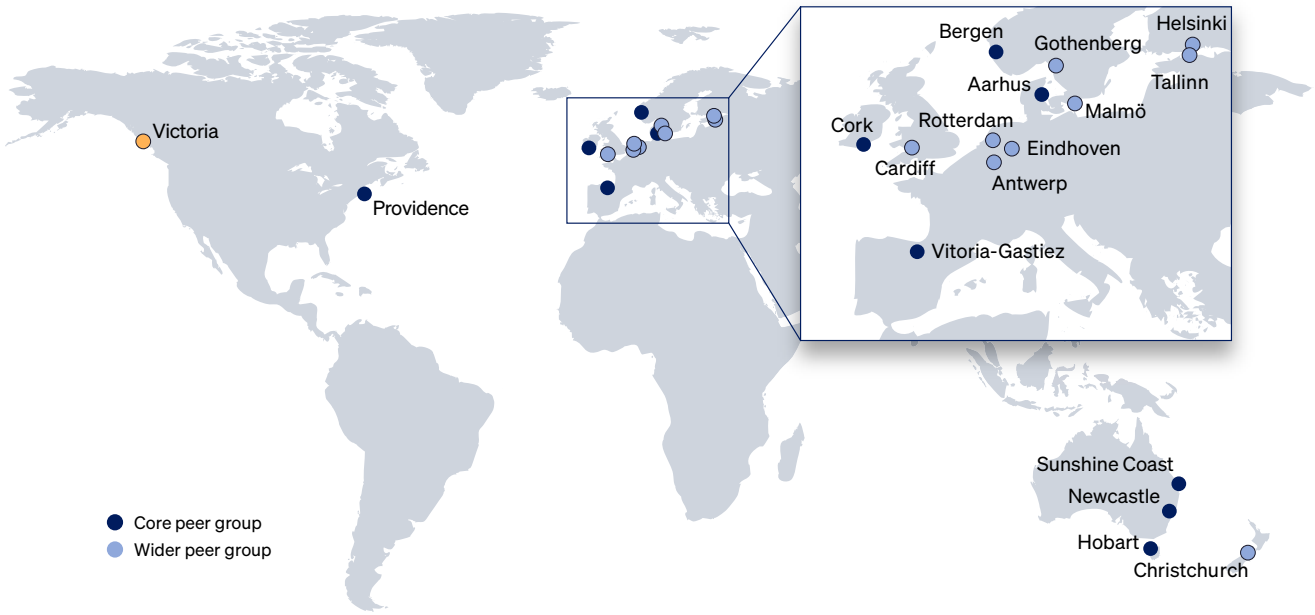


Figure 1: Greater Victoria's 'Peer' Cities Internationally

The eight core cities are:

Aarhus, Denmark

Aarhus, Denmark's second- largest city, is a rejuvenated coastal hub located 190km northwest of Copenhagen. Home to Scandinavia's second largest university, it is a major Nordic centre for research and education that has leveraged its knowledge, marine and green assets to become a centre for trade, services and the biotech industry. In recent years, Aarhus has adopted a clear internationalisation strategy to improve its ability to recruit and retain top talent, in which it has prioritised better cooperation with businesses, organisations and knowledge institutions.

Bergen, Norway

An Atlantic maritime hub whose growth was historically driven by offshore oil and gas, Bergen is Norway's 2nd largest city and has become more strategic about its strengths in subsea technologies, naval institutions and oceanography research. It has gradually established itself as the capital of 'Western Norway' and a national gateway to the country's world-famous fjords and mountains. Bergen has worked purposefully to diversify sources of tourism and to develop a broader economic identity as it looks to reduce dependence on extractive industries.

Cork, Ireland

Cork city region is the key driver of southwest Ireland's economy, and is an example of a smaller region whose higher level government has been proactive at facilitating growth and supporting secondary centres to become much more productive. Cork's advantages include success at attracting larger companies to achieve talent attraction, and universities that are industry focused. It is currently finding ways to accommodate population growth by permitting higher density development in the regional core, growing the network of town centres and investing in better connections and co-ordination with neighbouring cities.

Hobart, Australia

Hobart is the political capital and largest city of the Australian island state of Tasmania. With the second deepest natural port in the world, it is an important gateway to the Antarctic, and hosts a specialist cluster of cold climate products and services and scientific expertise. The city is home to a high concentration of marine scientists and many renowned Antarctic and Southern Ocean scientific institutions. Despite many challenges of social inequality, it has successfully optimised its well-preserved Georgian and Victorian architecture to drive cultural revival and renewal including strong engagement with its indigenous population.

Newcastle, Australia

Newcastle is Australia's seventh largest city, 160km north of Sydney. Formerly a hub for mining, steel production and trade, it is pivoting to knowledge industries for a more resilient economy. The five councils that compose Greater Newcastle are overcoming unsuccessful past attempts at collaboration to align their future visions for the region with this transition in mind. The population of Newcastle continues to rise, driven by the revival of the city centre, re-urbanisation of its university, and talent attraction from Sydney. This is creating new challenges to contain urban growth, attract larger new businesses and skilled workers and maximise the opportunities of its port and airport. [2]

Providence, United States

Providence, the political capital of the US state of Rhode Island, is a fairly compact city famed for its historic buildings, extensive parkland system and large, deepwater seaport. The city is home to 8 hospitals and 7 post-secondary institutions, which have in recent years helped to drive growth in healthcare and high-tech industries. A "Great Streets" initiative to improve the city's public spaces and encourage greater uptake of active transport is part of the effort to support an urban fabric more conducive to the innovation economy.

Sunshine Coast, Australia

Sunshine Coast, Australia's twelfth largest urban area, is currently undergoing a cycle of rapid transformation. Its beach village lifestyle equation and access to natural inland amenities are helping the region to attract a new wave of workers from Brisbane and become more spatially attuned. The pro-growth local government has been focusing on how to win reputation as a smart community and preemptively maintain housing affordability. It is currently striving to secure nomination as a UNESCO biosphere in order to preserve its natural landscapes, and has strategically designated one of its many centres as a definitive CBD in an attempt to drive digital innovation and economic growth.

Vitoria-Gasteiz, Spain

Vitoria-Gasteiz is the seat of government of the Basque Country in Northern Spain. It is consistently voted as among Spain's top 5 places to live, and yet has grown genuine economic strengths in healthcare, aeronautics and gastronomy. A former European Green Capital and UN Global Green City Award winner, the focus of recent urban strategy efforts have been to accommodate a growing population in central neighbourhoods, and to build a broad base of jobs around its high value sectors.

The analysis of demographic, economic and strategic trends also identified a group of cities that have been making an intentional transition to a higher value economy for longer. These cities can act as a target peer group for Greater Victoria in the future.

These cities all share:

- a smaller population size within their national economies, with a regional population between 500,000 and 1,500,000, and/or core city population of less than 700,000
- a pivot to the knowledge economy and efforts to grow the innovation ecosystem
- an abundance of natural assets and their strong liveability proposition, including their coastal or river location and easy access to state or national parks and nature reserves
- an important role within the wider multi-city region
- experience of a strong growth and demand cycle, that has required optimisation of infrastructure and investment projects.

Many of these cities also share additional characteristics of specific relevance to Greater Victoria in the current period, for example:

- specialisation in marine and maritime industries
- track record of inner-city redevelopment and restructuring
- successful efforts to promote economic and social inclusion and improve government agility
- successful response to previous crises
- joined-up approaches to growing the innovation ecosystem
- successful deployment of innovation districts.

City	City Size (m)	Metropolitan size (m)	Key Greater Victoria-relevant characteristics
Antwerp	0.52	1.2	Marine and maritime industry specialisation; track record of inner-city redevelopment and innovation district development.
Cardiff	0.36	0.5	Efforts to promote economic inclusion and reskilling; track record of inner-city reactivation and role of higher tier of government.
Christchurch	0.38	0.6	Successful response to crisis; efforts to promote economic and social inclusion of its indigenous population.
Eindhoven	0.23	0.8	Successful deployment of innovation district; joined-up approach to growing the innovation ecosystem; efforts to promote economic and social inclusion
Gothenburg	0.58	1.0	Efforts to promote economic and social inclusion; specialisation in marine and maritime industries
Helsinki	0.65	1.5	Joined-up approach to growing the innovation ecosystem; efforts to promote government agility
Malmö	0.32	0.7	Joined-up approach to growing the innovation ecosystem; track-record of inner-city redevelopment and restructuring
Rotterdam	0.65	2.5	Specialisation in marine and maritime industries; track record of inner-city redevelopment and restructuring; joined-up approach to growing the innovation ecosystem
Tallinn	0.43	0.6	Digital innovation and diversified economy; efforts to promote social and economic inclusion for a more advanced economy; efforts to improve government agility

Table 1 : Characteristics of Victoria's peer cities

In this paper we compare these regions across 6 segments in order to gain a comprehensive understanding of Greater Victoria's:

- Economic Resilience
- Innovation Economy
- Land Use and Spatial Form
- Mobility and Connectivity
- Liveability Fundamentals, Amenities and Appeal
- Health and Sustainability

Greater Victoria's benchmarking and data context

There are now more than 600 global benchmarks, spanning everything from detailed analytical studies by inter-governmental organisations, to index reports produced by consulting firms and business schools, large-scale perception surveys, reviews of performance and readiness in specific urban themes, and longitudinal statistical databases.

The Greater Victoria region appears in very few of these studies. Over the past year, Greater Victoria featured in fewer than 10% of these benchmarks, a much lower share than in Vancouver (45%), or other small cities such as Rotterdam (26%) and Tallinn (22%). Greater Victoria is most visible in larger global studies on specific topics, such as exposure to air pollution, resident quality of life, or all-round innovation ecosystem strength. It is rarely featured in the most high-profile and globally influential comprehensive studies, which often focus on a few larger cities in each country.

This is important for several reasons. First, benchmarks provide an international resource on how a city and region is doing, without which the task of fully assessing Greater Victoria's progress becomes harder. Second, benchmarks themselves also exert influence. They inform and shape the perceptions and decisions of mobile asset allocators, such as businesses, investors, media, and institutions. Their public visibility means they also inform the choices made by mobile talent, and the appetites of global visitors and entrepreneurs.

In the next period, Greater Victoria may attract more interest from benchmark producers — they may also seek wider third-party endorsement through a new and expanded generation of benchmarks. This can help to create a larger evidence base for strategic conversation, and will provide more opportunities for Greater Victoria to excel and to promote its high scores.

The data

The rapid growth in comparative data on cities and regions means that assembling data that is truly comparable across regions, countries and continents has become a richer but also more complex and challenging task. There are in some cases inherent limitations relating to data availability, geographic scale comparisons and data quality. For this paper, data includes:

- data from longitudinal statistical databases from recognised international data providers such as the OECD, Eurostat and the UN
- census, local and national statistics agency data
- real-time databases of firm, investment and employment dynamics
- crowd-sourced data uploaded by citizens on to online platforms
- public benchmarks of city and regional performance
- other comparative studies.

For a full note on scale, terminology, and full data criteria, please see the Appendix.

Data and benchmarking in a post-COVID context

The equation for city and regional competitiveness is likely to change as a result of COVID-19. It is likely that a cycle of more 'managed globalisation' is beginning, defined by a more interventionist federal/state government environment, so multi-level government relationships will become a competitive differentiator. Meanwhile new dimensions to global competition, including between smaller cities and regions, are emerging: on business climate, health management, resilience, competence, and perceived 'safe haven' or stability status.

COVID-19 also presents scrutiny of the virtues and advantages of urban scale and density. This means there will be more competitive analysis of how resilient the industry mix is, how well smaller regions can play complementary roles to larger cities, and what the platforms are like to support a model of innovation, land use flexibility, and localisation. There will also be more attention to detail on how well regions optimise public transport usage and shared spaces, and how they shift towards a cleaner, climate conscious economy underpinned by sustainable metropolitan economies and infrastructure.

Post-Covid, the competitive advantage of smaller cities and regions will also manifest in how well they manage and mitigate negative impacts and shocks, such as:

- A permanently altered visitor economy and changing appetites of both business and leisure tourists
- A severely curtailed arts and culture ecosystem constrained by consumer caution and transport restrictions.
- An innovation economy inhibited by slower flows of talent and ideas to fuel the ecosystem.

New indicators will emerge to track these phenomena in more detail. This has observed some key metrics and analysis where data allows.

1. Economic resilience

SUMMARY

Modest productivity growth in recent years means Greater Victoria remains a medium productivity city region by global standards. It has the slowest productivity growth among peer regions since the height of the financial crisis, and is in the bottom 20% of small metropolitan areas in OECD nations. The narrower gap in productivity compared to the regional hub, Vancouver, indicates that wider regional efforts to create higher value jobs may be required in the next cycle.

Greater Victoria has a larger core of financial, professional, scientific and technical jobs relative to its peer city regions internationally. This has helped the region to serve regional and global commodity markets, and to create new high-earning jobs that have underpinned growth in other industries. It also means Greater Victoria has a higher concentration of jobs amenable to remote-working, which has helped to strengthen resilience to the current crisis.

Greater Victoria benefits from a dual advantage of having one of the most highly educated populations of any small city region, and complementary post-secondary institutions that share in the region's resilience objectives. Degree attainment in Greater Victoria is above major European and Australian talent hubs. Post-secondary institutions score highly for global agendas on sustainability in both research and practice, but are unusual by international standards for not having a downtown presence.

By international standards Greater Victoria has a larger working age population, but also fewer young people and more elderly dependents. This raises a challenge for Greater Victoria in the coming years, to achieve the economic mix, vibrancy, critical mass and lifestyle quotient to strengthen attraction and retention of younger generations.

Into the 2020s, economic resilience for a relatively small, remote region is no longer just about building a diversified economy. It also involves improving the ability to support and grow an agile workforce, pivot into new industries and growth sectors, and foster the industry relationships that will withstand unforeseeable global crises such as the COVID-19 pandemic. Resilience also goes hand in hand with the transition to a higher value economy. As this pandemic and multiple other examples illustrate, higher value economies tend to be better able to withstand economic shocks, and more successful in delivering a broad base of economic prosperity, across many decades.

In this section, we have reviewed data on:

- economic productivity
- industry and employment mix
- talent and university strengths
- regional demographics.

Productivity

Greater Victoria remains a medium productivity city region, both by global standards and relative to other smaller regions among its international peer group. Current GDP per capita puts it in the bottom half of all OECD metropolitan areas, and the bottom 20% of small OECD metropolitan areas.[3] There is a 10% productivity gap to the Canadian average and a 20% gap to its wider peer group (see Figure 2).

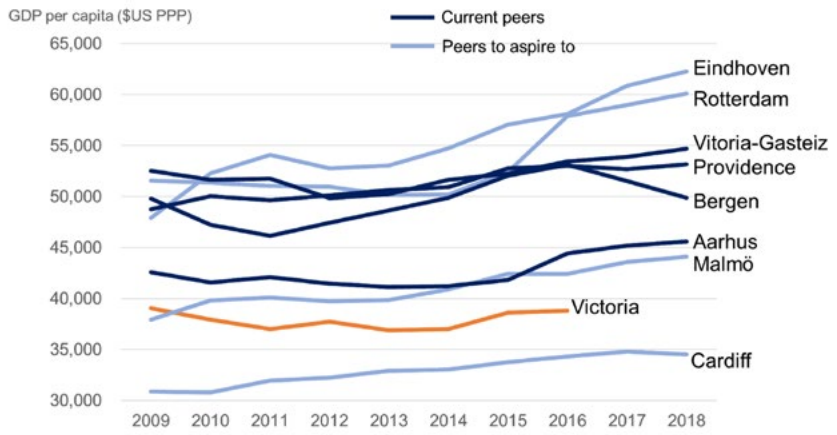


Figure 2: GDP per capita over time for Greater Victoria and selected peers

Source: OECD, Metropolitan Areas dataset. No data retrieved for Greater Victoria after 2016.

Greater Victoria's productivity grew very slowly in the last economic cycle. Greater Victoria stands out as being the only city among its measured international peers to have a lower productivity in 2016 than at the height of the financial crisis in 2009. International peer cities with much higher productivity in 2009 have in general further widened their gap with Greater Victoria, growing their productivity much more rapidly (see Figure 2).

Unusually in the current global economy, Greater Victoria is only a little less productive than its regional hub city, Vancouver. In most OECD countries especially, the larger centres of multi-city regions are growing their high value jobs base faster than smaller city regions and rural areas, due to the variety of agglomeration effects that see workers, businesses, customers and investors benefit from the interactions deriving from scale and proximity. The small gap to Vancouver suggests that regional linkages may be fewer than in other peer regions, and that whole-region or whole-province efforts to improve productivity may be required in order for Greater Victoria to bridge the gap with international peers.

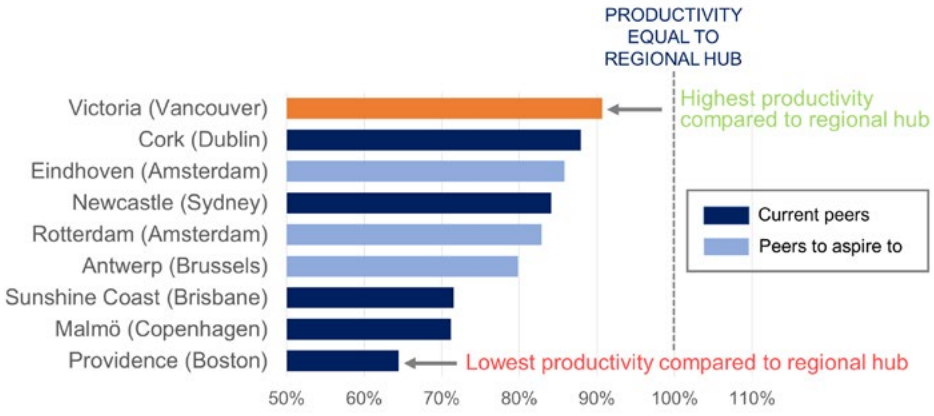


Figure 3: Productivity compared to regional hub city

Source: GDP per capita data from census agencies and similar; latest available

Industry mix

Greater Victoria's economy is more dependent on the public sector for employment relative to its international peer group. Its industry and jobs breakdown shows a higher level of reliance on health and social care, and public administration, relative to other cities. More than 13% of the region's jobs are currently in public administration, which is 7% higher than the average among Greater Victoria's core international peer group, and also more than 6% higher on average among Canadian peer cities reporting to the World Council for Cities Open Data Portal.[4]

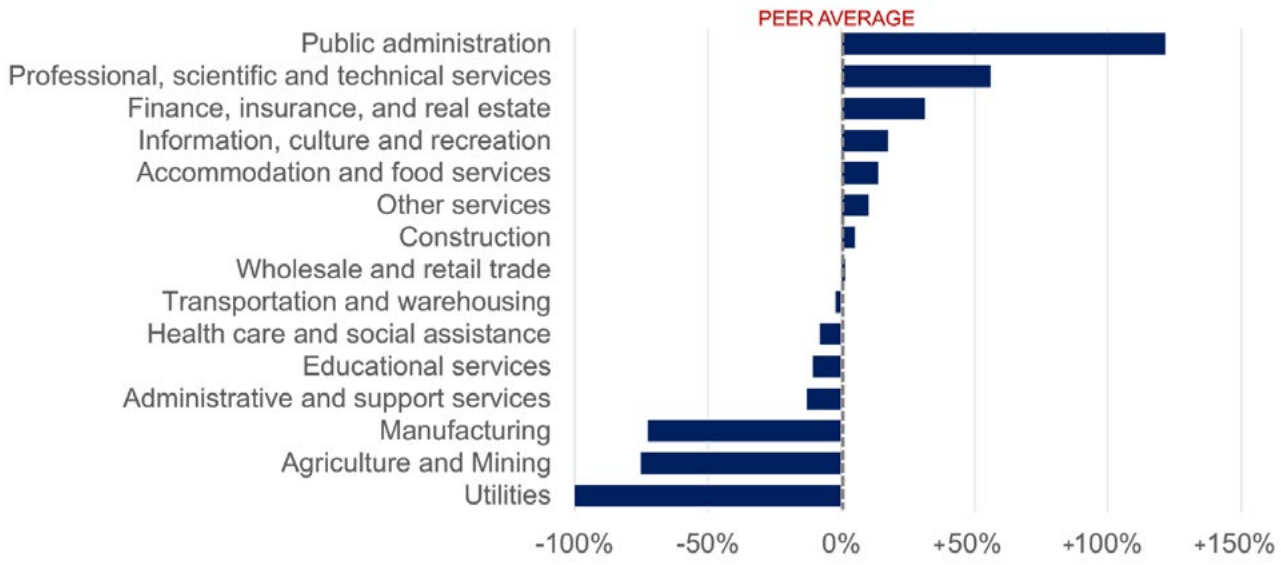


Figure 4: Indicative concentration of employment by major industry sector in Greater Victoria, relative to peer average (not to be used as direct like-for-like due to minor definition discrepancies)

Source: Census data. *Based on aggregation of sectors according to different national definitions (see Appendix for full details). Cork not included due to incompatible sector definitions.

Relative to international peers, Greater Victoria has a larger pool of digital, financial and real estate services professionals serving regional and global markets. Nearly 9% of workers are currently employed in professional, scientific and technical jobs in Greater Victoria, compared to 5.6% on average among Greater Victoria's core peer group. The share of people working in finance, insurance and real estate is now higher in Greater Victoria than on average among its peers, and the region has the 2nd highest share of jobs in the information, culture and recreation sector. Overall there is a significant concentration of high-value knowledge and business services that are remote-working friendly.

Talent and university strengths

Among small city-regions Greater Victoria has one of the most highly educated populations globally. With more than 50% bachelor's level degree attainment or higher, Greater Victoria has the highest attaining population among both its core and wider peer group. Greater Victoria's higher education attainment rate is also higher than in European talent hubs such as Zurich and Stockholm.[5]

Economic resilience has been supported by a responsible set of post-secondary institutions in University of Victoria, Camosun College and Royal Roads University. Each institution promotes efforts to reform curricula to focus on resilience, adaptation, and blended learning. In the latest study assessing universities' progress towards implementing the SDGs, the University of Victoria ranks an impressive 4th globally for climate action and 25th for responsible consumption and production.[6] This highlights an opportunity for the region's post-secondary institutions to help lead the charge on major global agendas and be responsible stakeholders in Greater Victoria's journey to even stronger resilience.

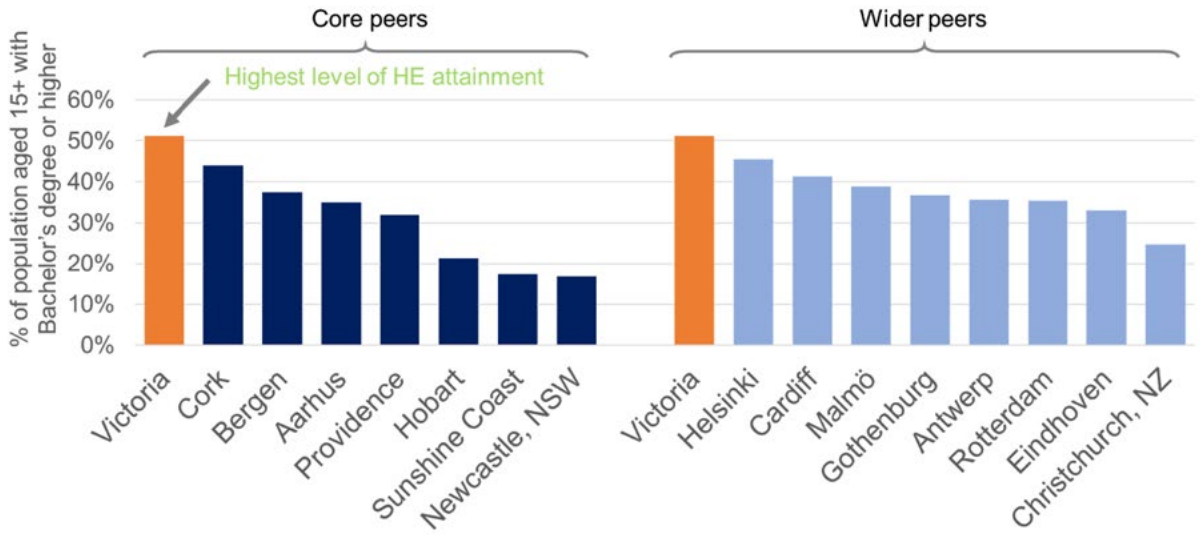


Figure 5: Higher Education attainment by region

Source: Census data (latest available). *In US cities, figures for 18+ converted to 15+ based on county-level population estimates. **Newcastle here defined at the Newcastle-Maitland urban area scale. *** Data for European peers is at the regional scale (NUTS 2).

Demographic fundamentals

Greater Victoria's population profile is currently favourable relative to peers but younger talent will become a priority. Over the past 15 years, Victoria's built-up area population grew by 18%, putting it on a par with Seattle, Dublin and Vienna, and among the top 100 fastest growing small city regions in North America, Europe and Australasia. Over the next 15 years, Victoria is set to be among the top 100 fastest growing city regions in North America, and just outside the five fastest growing Canadian urban regions. Over this period, on a like for like basis, Greater Victoria will grow faster than Toronto, Montreal, Boston and New York, and faster than any of the cities in its wider peer group.[7]

Greater Victoria benefits from a larger working-age population than many of its international peers. More than 65% of Greater Victoria's population is between 15 and 64 years old, and the city region has the 2nd highest working age population among its core peer group.

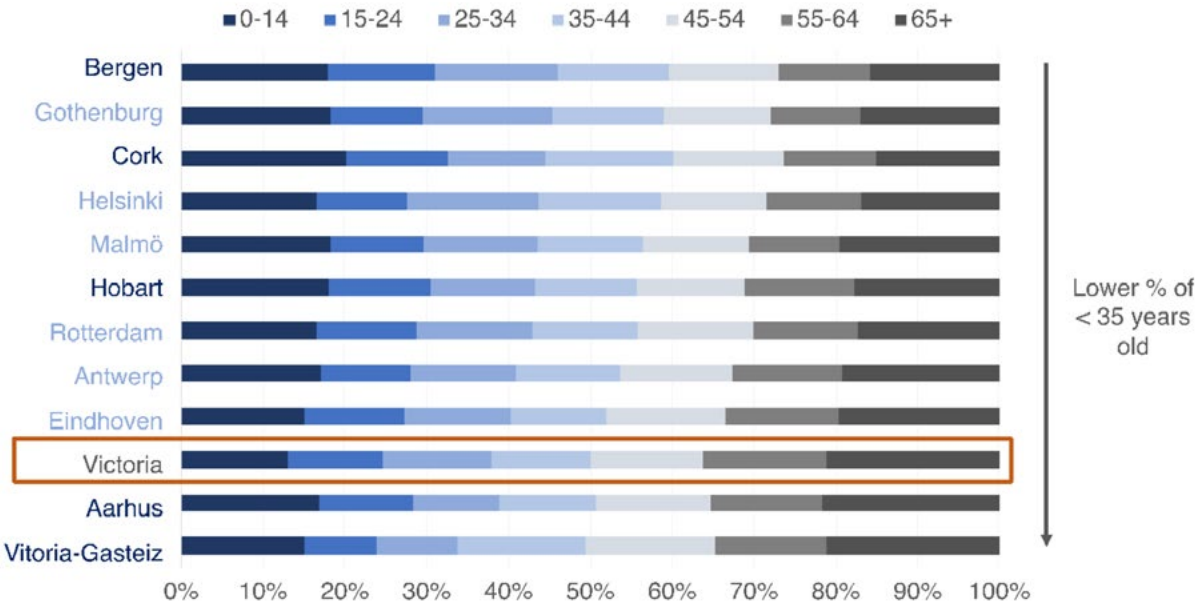


Figure 6: Relative breakdown of population by age groups

Source: Census data, latest available data. Dark blue = current peers. Light blue = peers to aspire to.

But by global standards, Greater Victoria is also home to fewer young people and more elderly dependents, which may raise challenges in the coming years as its working-age population retires. Greater Victoria already has the highest proportion of people aged over 65 among its wider peer group, and the lowest share of people aged 0-14. In addition, 15% of Greater Victoria's population is above 50 years old, the second highest share among its wider peer group after Vitoria-Gasteiz, and less than 25% of the population is between 15 and 35 years old (see Figure 6). This points to an emerging imperative for Greater Victoria to attract and retain younger workers to support its growing elderly population, and support its working-age residents. This may co-incide with wider imperatives around the co-location of housing, transport and healthcare services and the curation of new city centre locations that are attractive to younger generations.

2. Innovation economy

SUMMARY

Greater Victoria already has many of the promising fundamental ingredients necessary to grow its innovation ecosystem. On a like for like basis, it is home to more early-stage innovative start-ups than other regional economies. The concentration of jobs in finance, insurance, law and real estate can support companies scaling up, while there are also emerging signs of specialisation in creative industries and ocean tech that can be built upon in the next cycle. The entrepreneurial mindset and culture of risk taking is also very present.

However, there are also some important barriers to be addressed if the region is to fully exploit its innovation potential. The city region does not yet have a critical mass of rapidly scaling or globally influential technology companies, and appetite, incentives and ability to scale up the firms that do exist remains a key challenge. A much higher proportion of the region's innovative firms are small relative to international peer cities and barriers to accessing venture capital remain relatively high. Greater Victoria also has a lower level of specialisation in specific high-growth, future-ready industries such as AI, quantum computing, Greentech and MaaS.

Greater Victoria's post-secondary institutions stand out for their strong track record of supporting innovation and attracting international researchers. But the ability of these institutions to catalyse the innovation economy is held back by a lack of downtown presence and more limited research power. Greater Victoria remains one of the only city regions in its wider international peer group without a university presence downtown.

A region's innovation economy depends on scale, specialisation, and incentives to enterprise.

In this section, we have reviewed data on:

- innovative firm activity and performance
- innovative firm specialisations
- venture capital activity
- quality of entrepreneurial infrastructure
- employment dynamics
- innovation track record of post-secondary institutions.

The promise

Greater Victoria already possesses promising innovation intensity. On a like-for-like basis the Greater Victoria region has twice as many innovative companies as Malmö or Manchester, and is even on a par with Stockholm and Los Angeles. Greater Victoria also ranks 2nd among its core peers behind Providence for the number of recognised tech-enabled start-ups, scale-ups and companies, and is already on par with some of the cities it can aspire to becoming, such as Gothenburg. One major study places Victoria in the top 150 most innovative cities globally in terms of the all-round scale and maturity of its innovation ecosystem.[8] This puts Victoria on a par with larger secondary cities such as Lyon, Porto, Glasgow and Adelaide, or among the top 25 among sub 1-million person city-regions, ahead of Cambridge, UK.

Greater Victoria is also home to a stronger cluster of services firms that have the potential to fuel and finance the innovation economy. 4.5% of Greater Victoria's workforce are employed in finance, insurance and real estate, compared to a peer average of 3.4%. Capable talent in these industries is one reason why Victoria ranks 117th globally in a major study of the world's best fintech ecosystems.[9] Victoria is now in the global top 10 among small regions, or on a par with Lausanne, Utrecht and Gothenburg. Greater Victoria is also among the top 10 small regions globally for the presence of top companies with expertise in architecture, engineering and related urban services, or 2nd among all of its peers.[10] These harbour potential to be part of the set of cross-fertilising innovative sectors of the next cycle.

Greater Victoria's innovation ecosystem benefits from a higher share of companies in creative-led industries. With 4.1% of tech enabled companies in creative industries, the city region ranks 2nd among its core peer group and above many of the cities in its wider orbit. The development of the Arts and Innovation District emerges as an opportunity to support the arts and culture sector, that can in turn boost the creation of high-value jobs.

Greater Victoria can leverage its emerging specialisation in ocean tech.[11] More than 1.6% of Greater Victoria's recognised tech-enabled firms are in ocean tech. This is the 5th highest share among its wider peer group and puts Greater Victoria on a par with or ahead of other regions with established marine and maritime clusters such as Rotterdam and Antwerp. The development of the Ocean Futures Cluster can help to support and grow existing companies and develop world leadership in that sector.

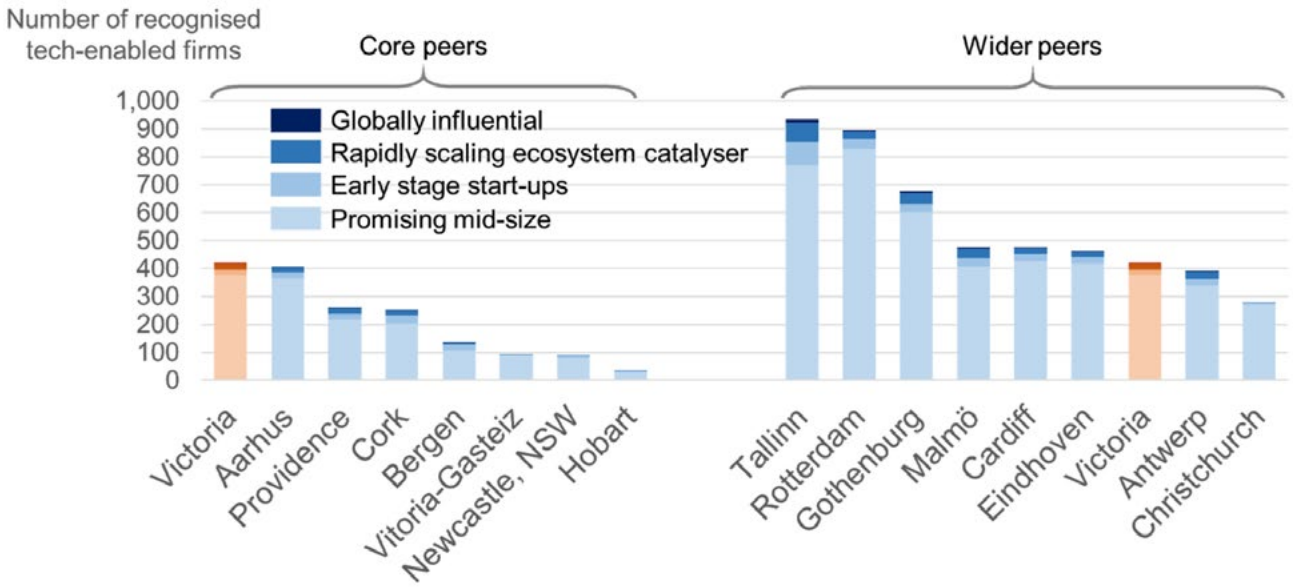


Figure 7: Number of recognised tech-enabled firms by stage of evolution

Source: Crunchbase (June 2020 data). See appendix for details of terminology used.

Companies are supported by a well established entrepreneurial infrastructure. Greater Victoria is 10th out of 220 regions globally for the number of co-working spaces per capita and in the top 20% globally for the number of tech meetup members per capita.[12] This indicates an active and can-do culture, but raises questions about the efficiency and effectiveness of entrepreneurship support.

Greater Victoria has a lower level of reliance on part-time and temporary jobs, and a more developed business culture of actively seeking employees with technical abilities. As a share of all new job postings, Greater Victoria has a relatively high share of full-time jobs, and also has the 2nd highest share of advertised remote jobs, at 3.86% of the total (see Table 1). Meanwhile Greater Victoria is 3rd among its core peers for the share of job postings requiring data analytics, coding or scientific experience, behind only Cork and Cardiff. This illustrates that Greater Victoria has a small but strong cadre of digital experts to draw upon. As more high-value jobs are created, it is imperative to ensure the workforce have the skills to meet the demand.

City	% full time jobs	% of remote jobs	Sectors of top recruiter firms by size
Providence	76.2%	2.3%	Healthcare, Consumer goods
Victoria	60.3%	3.9%	Public Health Administration, Public Administration, Food & Hospitality
Cardiff	50.1%	4.8%	Food & Hospitality, Public Administration
County Cork	49.4%	5.1%	Consumer electionics, ICT Research Centre, E-commerce & Cloud Computing Services
Hobart	47.9%	1.4%	Public Administration, Food & Hospitality
Christchurch	47.3%	0.7%	Public Health Administration, Food & Hospitality
Sunshine Coast	45.6%	3.7%	Public Administration
Newcastle, NSW	40.5%	1.6%	Food & Hospitality, Public Health Administration

Table 2: Share of FTE and remote job postings, and top recruiters across the region

Source: Indeed. Jobs do not sum to 100% as part-time jobs, apprenticeships and internships, and commission positions have not been included in the analysis. Some job postings also do not indicate the type of job. See appendix for further details and scale used.

The barriers

Greater Victoria does not yet have a critical mass of rapidly scaling or catalytic tech firms by international standards. While the region has many tech-enabled firms operating in the region, it still has room to improve to catch up with the cities in its wider peer group. While its wider set of peers record on average 42 globally influential and rapidly scaling tech-enabled firms, Greater Victoria is only home to 25. In terms of globally influential firms, only Helsinki, Malmö, Tallinn, Rotterdam and Gothenburg are above Greater Victoria among its wider set of peers, but the gap increases when looking at the number of rapidly scaling ecosystem catalysers (see Figure 7).

Greater Victoria has many more small companies among its pool of tech firms, suggesting that appetite, incentives and ability to scale may be a challenge. Relative to its peers, Greater Victoria has the 3rd highest proportion of small firms,[13] at around 88%.

Greater Victoria's innovation economy has fewer defined specialisms in high growth, future-ready industries relative to its peers. Relative to its full peer group, Greater Victoria is a HQ location for more high-tech innovation firms in financial services and fintech (+46%) and pharmaceuticals, biotech and life sciences (+41%), but fewer in low carbon and cleantech (-33%) and engineering and advanced manufacturing (-54%). Greater Victoria also falls slightly behind its peers for the share of companies specialised in next-generation, disruptive technologies such as artificial intelligence, quantum computing or augmented reality (-2%), and for adoption of sector-specific technologies such as advanced manufacturing, green tech, or mobility-as-a-service, with only 6.2% of its innovative firms specialising in those sectors compared to an average of 11.4% among its wider peer group (see Figure 8). Greater links between research institutions and industry can boost knowledge transfer from research to industry and support SMEs in product development and commercialisation.

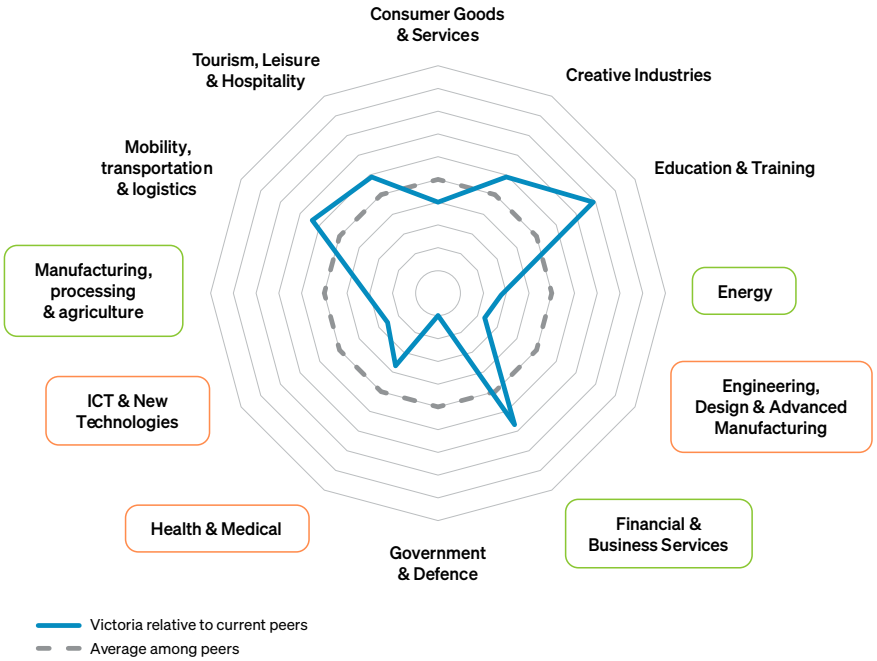


Figure 8: Breakdown of tech-enabled firm activity by major sector, compared to current global peers

Source: Crunchbase (June 2020 data). See appendix for methodology.

Greater Victoria's innovative firms appear to face more barriers to attracting venture capital. Greater Victoria does not yet have the venture capital activity required to support the innovation ecosystem, especially among early-stage ventures. Among its core peer group, Greater Victoria has the 2nd lowest share of start-ups and scale-ups backed by venture capital, with only 10.9% of its firms having received venture capital investment compared to an average of 25%.[14] This is an even more important concern for Greater Victoria's early-stage ventures, as only 5% of firms raising seed funding or Series A have received VC investment compared to 32% on average among its core peer group. Of the firms that do succeed in attracting VC investment, 4.5% have received more than €1m in funding, compared to 8% in Newcastle, 7.4% in Cork and 6.5% in Sunshine Coast.[15]

Greater Victoria's innovation economy is not yet highly complementary to Vancouver and Seattle. Greater Victoria's innovation economy is quite similar to that of Vancouver and Seattle in terms of its overall sector mix. The differences in specialisation range between 4% and -4%, indicating that there are not yet highly distinctive specialisations in Greater Victoria that serve the whole region. Greater Victoria does however boast a higher specialisation in advertising, marketing, edtech and creative industries (see Figure 9).

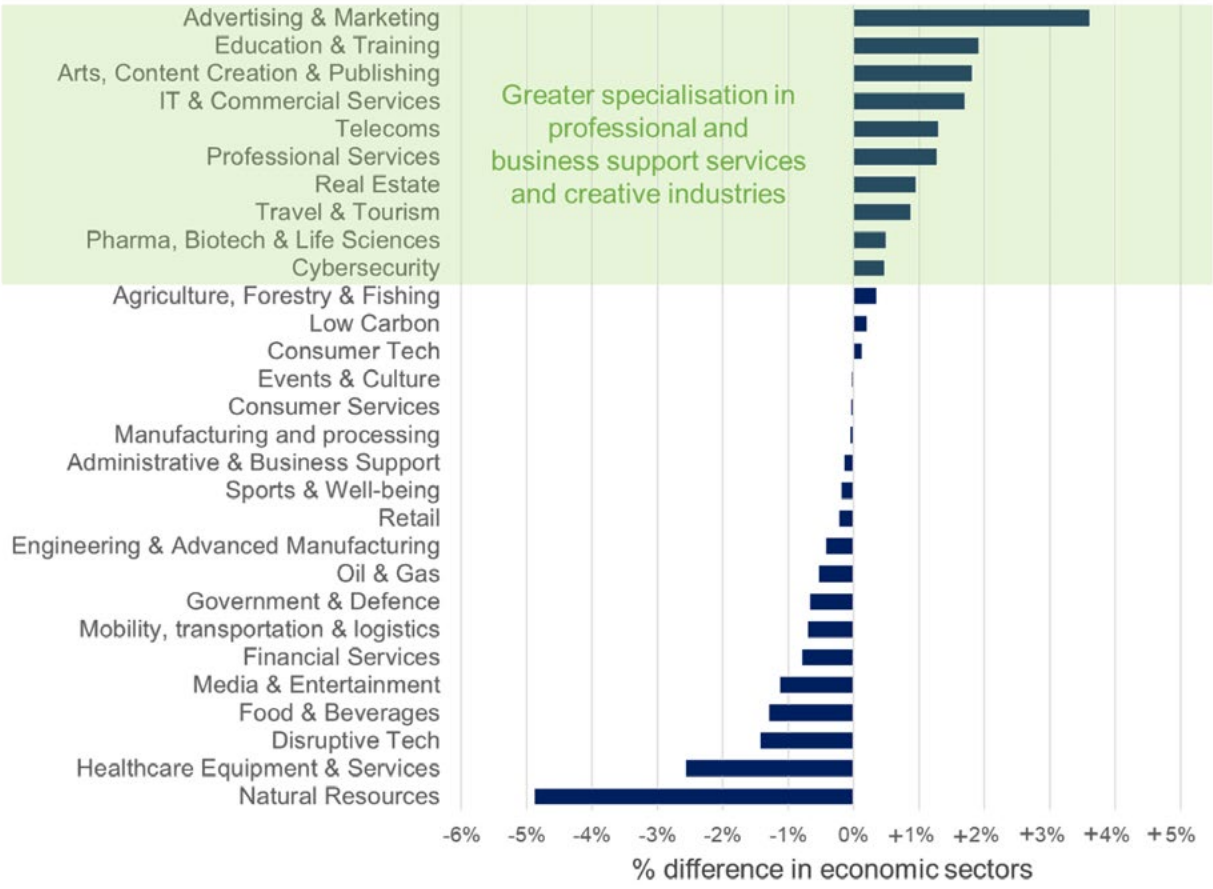


Figure 9: Greater Victoria's innovation economy relative to Vancouver and Seattle's sector mix

Source: Crunchbase (June 2020 data). See appendix for details of terminology used.

Higher education innovation catalysts

Greater Victoria stands out as having a critical mass of post-secondary institutions with a strong track record of supporting and driving innovation and attracting international researchers. The University of Victoria is currently ranked 61st globally in the major study of how well universities drive progress on Sustainable Development Goal 9 — Industrial Innovation and Infrastructure through creating new patents and spin-off firms and attracting research income from industry partners.[16] Similarly, research programmes and curriculum initiatives of Camosun College Royal Roads University indicate appetite to adapt to the post-COVID context. The University of Victoria also ranks an impressive 2nd among its wider peer group for international outlook, reflecting its ability to attract students and academics from around the world (see Figure 10).

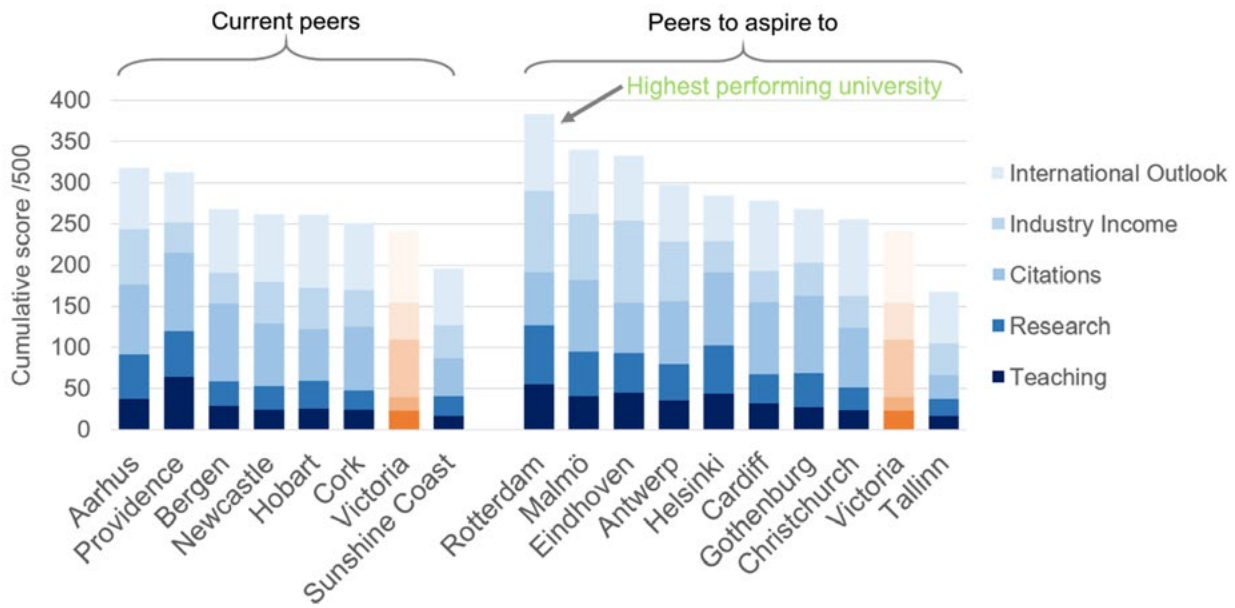


Figure 10: University performance of highest performing university in each region

Source: Times Higher Education (2020).

But the overall potential of Greater Victoria's post-secondary institutions to catalyse innovation is constrained by a lack of downtown presence and more limited research power. Its main research university, the University of Victoria, is located more than 5km away from the city centre, compared to an average of 2.4km among its peer cities. Meanwhile, although the University of Victoria's international outlook, citations and industry income are on a par with that of its international peers, its research influence is not yet viewed to have reached top global standards.

3. Land use and spatial form

SUMMARY

Greater Victoria has been slower than many of its peers to move to a medium-density development model. It has the lowest built up area density among nearly all the city regions that Greater Victoria can aspire to in the next cycle except Helsinki and Malmö, and its city centre has the lowest residential density among its core peer group except for the Australian cities. In the face of sustained population growth, the risk may be that Greater Victoria sprawls, with attendant negative impacts on economic intensity, commuter liveability, and carbon emissions.

Greater Victoria has a more dispersed innovation ecosystem and a less established pattern of clustering and co-location among existing tech-enabled firms relative to its peers. The new Arts and Innovation District may help to boost the process of co-location and collaboration that has been critical to the success of smaller European regions' innovation journeys, but this will likely depend on close coordination between landowners, local growth partners and place advocates and on efforts to marry up innovation uses with amenities and public spaces.

In the next cycle, Greater Victoria will face new imperatives to pursue infrastructure projects as anchors of new high proximity, mixed-use precincts that can help ultimately to close the productivity gap with other regions. The current CBD growth project can help the region to develop the critical mass of city centre residents required to drive innovation, strengthen productivity, and deliver the next generation of high-amenity urban living.

In this section, we have reviewed data on:

- spatial form: built-up area density and city-centre (downtown) density
- spatial dynamics of the innovation ecosystem
- housing stock and dwelling type.

Spatial form

Greater Victoria's built-up area is less dense than that of its peers. Greater Victoria's built-up area is nearly a third less dense than other Canadian regions, and nearly half as dense as the European peer average of 3,100 per km^2.[17] Continuing to pursue ambitions for a medium-density development model may help the region to unlock the medium-density, high-amenity model that drives talent attraction in many of Greater Victoria's European peers.

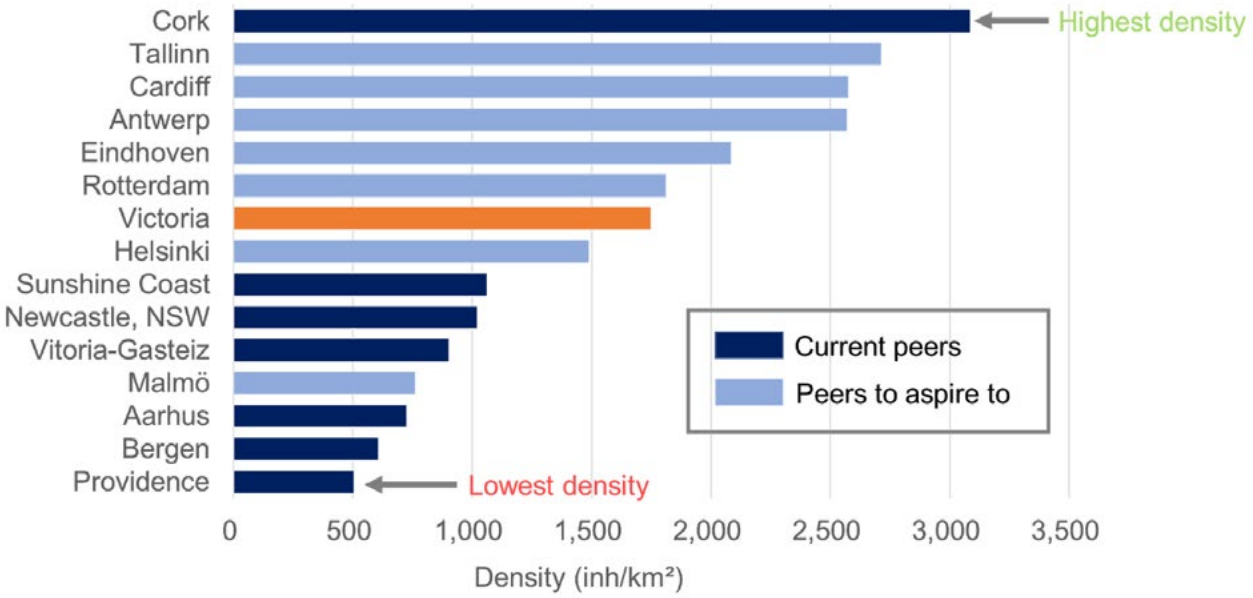


Figure 11: Built-up area density

Source: OECD, 2018.

Greater Victoria's downtown scale and density is also relatively low compared to that of its peers. Its city centre has the lowest residential density among measured regions in its current peer group outside of Australia, and at 3,970 people per sq.km., Greater Victoria's city centre density is significantly lower than the wider peer average of 6,500 people per sq.km. It has been well established that a larger residential population in the city centre has been a major driver of economic diversification and demand in other cities.

	Population	Size (km²)	Density (inhabitants/km²)	CBD* population as share of region
Vitoria-Gastiez	37,880	1.5	25,420	11.6%
Providence	17,800	1.7	10,220	1.1%
Rotterdam	34,000	4.9	6,970	5.2%
Helsinki	12,700	2.0	6,230	0.8%
Bergen	6,770	1.2	5,640	1.6%
Tallinn	4,440	1.1	4,030	1.0%
Victoria	6,150	1.6	3,970	1.7%
Malmö**	27,590	7.0	3,940	3.7%
Eindhoven	8,130	2.6	3,090	1.1%
Hobart	2,300	1.9	1,210	1.0%
Newcastle, NSW	4,910	5.9	830	1.5%

Table 3: CBD size and scale, and relationship with wider region

Census data. *See Appendix for details. *Malmö's size includes the port area.

Spatial dynamics

There is now evidence that proximity is a driver of innovation within city regions. The emergence of innovation districts worldwide reflects the recognised importance of firms in certain industries being more tightly clustered in order to drive discovery and create opportunities for people and small and medium-sized enterprises. Proximity between firms, institutions and investors typically enhances trust and collaboration, enables the sharing of spaces, infrastructure and equipment, and can facilitate knowledge transfer.

Relative to other cities, Greater Victoria's innovation ecosystem appears to be more dispersed, characterised by a less established pattern of clustering and co-location among tech-enabled companies. It is less clustered than the majority of international cities, and lacks the critical mass for a small city to develop a strong innovation economy. Learning from other cities, such as Eindhoven, Malmö or Helsinki, the city region can facilitate co-location of innovative firms and develop a more clustered economy. Around 95% of Greater Victoria's recognised tech-enabled firms are located in Victoria and Saanich.[18] There are a few small pockets of innovation across the region, such as the Vancouver Island Technology Park, led by the University of Victoria, and pockets of clustered innovation-rich firms along Keating Cross Road (for example), but the creation of Victoria's Arts and Innovation District, as part of its Victoria 3.0 strategy, is clearly an essential part of the process of co-location and collaboration. Close coordination between landowners, local growth partners and place advocates will be essential in creating an amenity-rich and high-quality place to benefit residents and businesses.

Greater Victoria's innovation economy is also more evenly spread across multiple industries. Many other smaller regions are more specialised in particular sectors where they have advanced industrial functions or research niches (see Figure 12).

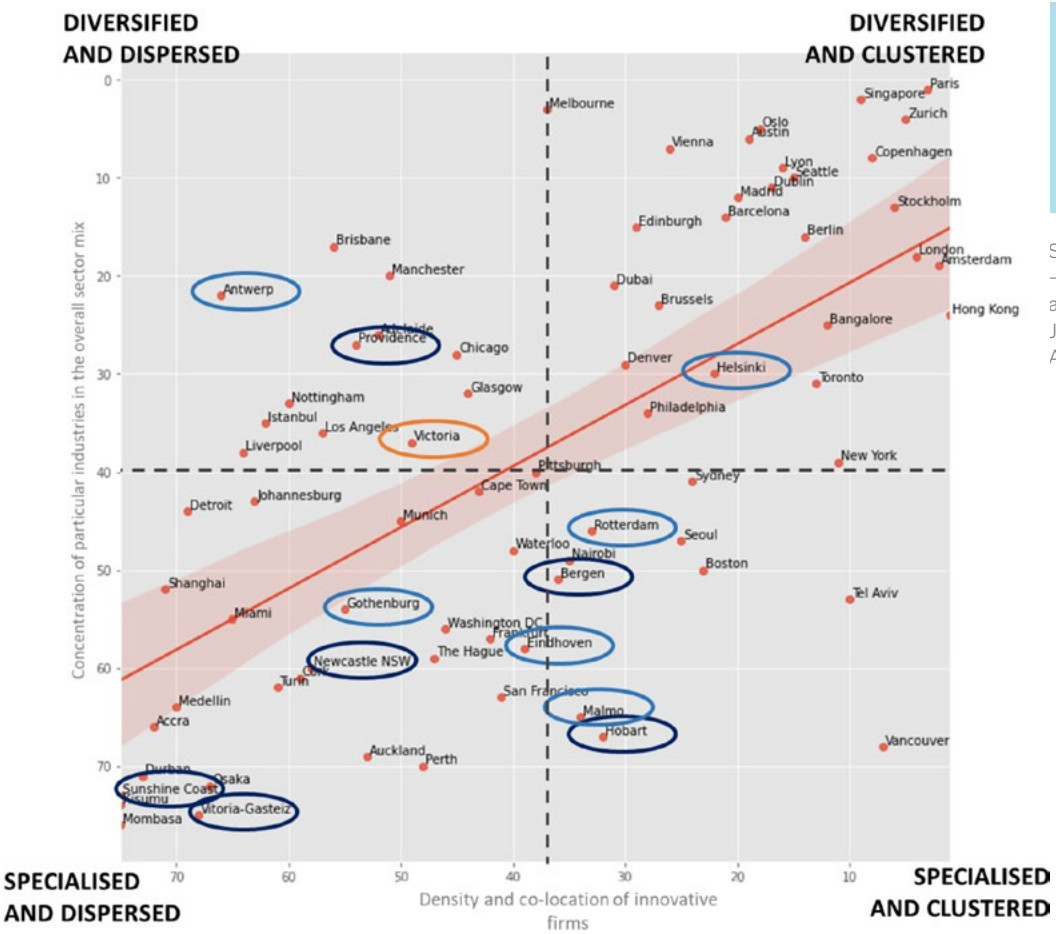


Figure 12: Spatial concentration and industry diversification of Greater Victoria and peer cities' innovation economies

Source: The Business of Cities – geo-analysis of firm location and industry activity – based on June 2020 Crunchbase data. See Appendix for details.

Housing stock

Greater Victoria's relatively low-rise, low density housing pattern means land consumption is still relatively high compared to other regions. 40% of the region's housing stock is composed of single detached houses, and a further quarter is made up of apartments in buildings with fewer than 5 storeys. Meanwhile, apartment buildings with more than 5 storeys represent only 6% of Greater Victoria's housing stock, compared to 10% across Canada.[19] Greater Victoria has a higher share of multi-family buildings than the Canadian average, but significantly fewer than in peers, for example in Scandinavia.

Greater Victoria also has a relatively high home ownership rate. At 63%, the rate of homeownership in Greater Victoria is in line with that of its current peers (63%), but significantly higher than many of the European peers that Greater Victoria can aspire to, such as Malmö (50%), Cardiff (56%) and Gothenburg (57%).[20] This suggests there will become an important agenda about how Greater Victoria produces the mix of tenures and residential living styles to suit a flexible, high interaction economy.

4. Mobility and connectivity

SUMMARY

Greater Victoria still has an efficient commuting system compared to its international peers. The region benefits from short commuting times and an encouraging modal split, with 15% of its population adopting active transport modes to go to work. This is a strength that Greater Victoria can improve upon in the next cycle, especially as it directly links to regional productivity and well-being.

However, the region stands out for slower momentum in terms of high-capacity public transport infrastructure or wider pipeline of catalytic projects. Many of Greater Victoria's peer city regions are pushing forward with ambitious transport infrastructure projects and have amassed the tools necessary to deliver efficient bus rapid transit, light rail, subway and commuter rail systems. Although Greater Victoria is investing in important sustainability projects such as the Capital Regional Wastewater Treatment Project, larger catalytic projects to accelerate the growth of the low carbon economy may be needed.

As regional, global and digital connectivity become even more critical in the post-Covid economy, Greater Victoria needs to be vigilant about its physical and digital platforms. Improved connectivity to high innovation cities in the West Coast and beyond, as well as efforts to ensure greater consistency in regional internet speeds, may become more important competitive differentiators.

In this section, we have reviewed data on:

- spatial form: built-up area density and city-centre (downtown) density
- spatial dynamics of the innovation ecosystem
- housing stock and dwelling type.

Strengths

Greater Victoria is still efficient for car-driving commuters by global standards. More than 70% of Greater Victoria's population commutes for less than 30 minutes.[21] This means the share of Greater Victoria's population with a short commute is higher than the Canadian and United States average of 61%.[22] Greater Victoria also has the lowest average commute time among its 6 core international peers for which comparable data are available, and an average commute time nearly 4 minutes shorter than the United States average.[23] However, the experience of other smaller city regions globally shows that these advantages can be quickly eroded when population growth is not sequenced with effective, high-capacity public transport infrastructure, which will create an imperative for Greater Victoria to remain vigilant into the next cycle.

Greater Victoria inherits a lower car dependency than many of its core international peers, but shifts will be required. Only 60% of people drive to work, the lowest share among core peers for which comparable data are available. Greater Victoria also has the highest share of people choosing to commute via active transport among this core peer group, at more than 15%. The future development of Greater Victoria's regional bicycle network and other e-mobility options can increase this split, as car dependency is still higher than in many European regions. Antwerp and Malmö for example have a car dependency of around 50%, and an active transport split ranging between 20% and 32% (see Figure 13).

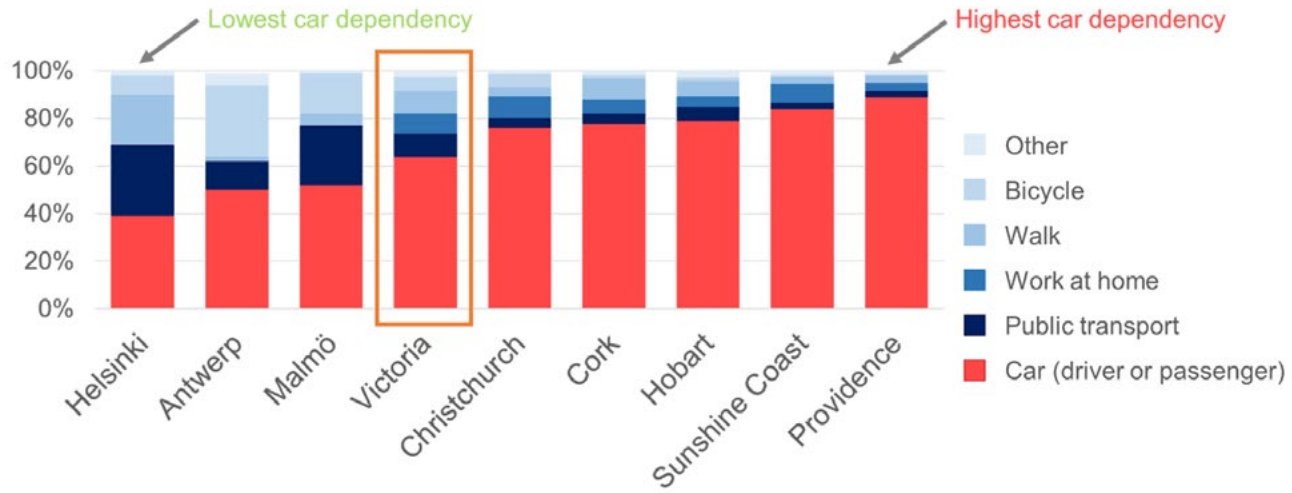


Figure 13: Mode share of travel to work trips

Source: Census data. *In all cases, "did not/prefer not to say" and "did not go to work" have been excluded from the denominator of total trips to work. **Private vehicle = car, van, truck or motorcycle (driver or passenger). ***Other = taxi and "other".

Potential competitive challenges

Greater Victoria is alone among its peers to lack high-capacity public transport infrastructure. Apart from its local bus network, Greater Victoria does not yet have any high-capacity public transport systems. While this is in part due to the region's unique geography, it results in more cars per capita and reduced ability to accommodate CBD growth. With 68 cars per 100 people, Greater Victoria has the 2nd highest number of cars per capita among 11 peers, only behind Sunshine Coast (85) and significantly above its Nordic peers' average of 43 cars per 100 people. Driving a high-investment, high return public transport system appears to be challenged by the crowd-sourced perception that Greater Victoria's public transport is one of the most expensive as a proportion of income among its core peer group. The vast majority of Greater Victoria's international peers have or are planning for two or more forms of high-capacity public transportation infrastructure, including bus rapid transit, light rail and tram, metro or subway systems, and regional commuter rail (see Table 4). This has allowed these regions to anchor larger scale urban economy adjustments.

City	Bus rapid transit?	Light rail/tram?	Metro/subway?	Commuter rail?	Total
Antwerp	N	Y	Y	Y	3
Gothenberg	Y	Y	N	Y	3
Rotterdam	N	Y	Y	Y	3
Vitoria-Gastiez	In progress	Y	N	Y	2.5
Aarhus	N	Y	N	Y	2
Bergen	N	Y	N	Y	2
Eindhoven	Y	N	N	Y	2
Malmö	N	N	Y	Y	2
Providence	Y	N	N	Y	2
Tallinn	N	Y	N	Y	2
Sunshine Coast	N	In progress	N	Y	1.5
Cardiff	N	N	N	Y	1
Cork	N	N	N	Y	1
Newcastle	N	N	N	Y	1
Christchurch	N	N	N	N	0
Hobart	N	N	N	N	0
Victoria	N	N	N	N	0

Table 4

Other regions are pursuing larger catalytic projects that can drive positive spillovers. Greater Victoria is investing in important sustainability initiatives, and the Capital Regional District Wastewater Treatment Project is the 5th most expensive per capita among the largest infrastructure projects currently being delivered in Greater Victoria's peer cities. But many of Greater Victoria's international peers are proactively investing in infrastructure projects that are tailored to imperatives to accommodate growth, improve connectivity, and achieve significant emissions reductions. Identifying the next catalytic project post-Covid-19 that aligns with the economic vision will be an important task.

Greater Victoria is competing in a context where its regional rail and global air connectivity is much more limited than its peers'. Among the 150 most globally influential urban economies globally, Greater Victoria can only access 7 within a 5-hour journey time. This is significantly lower than the 21 that Greater Victoria's wider peer group can access (see Figure 14). At the same time, the time and speed for large scale non-air based travel between Vancouver and Victoria is much greater than other similar regions (see Figure 15). This has important implications for how Greater Victoria organises to overcome these disadvantages and build a complementary economy.

Figure 14: Number of global top 150 economies in a 5-hour flight reach

Source: Airport reports and desk research. *150 most globalised cities according to the GaWC Group

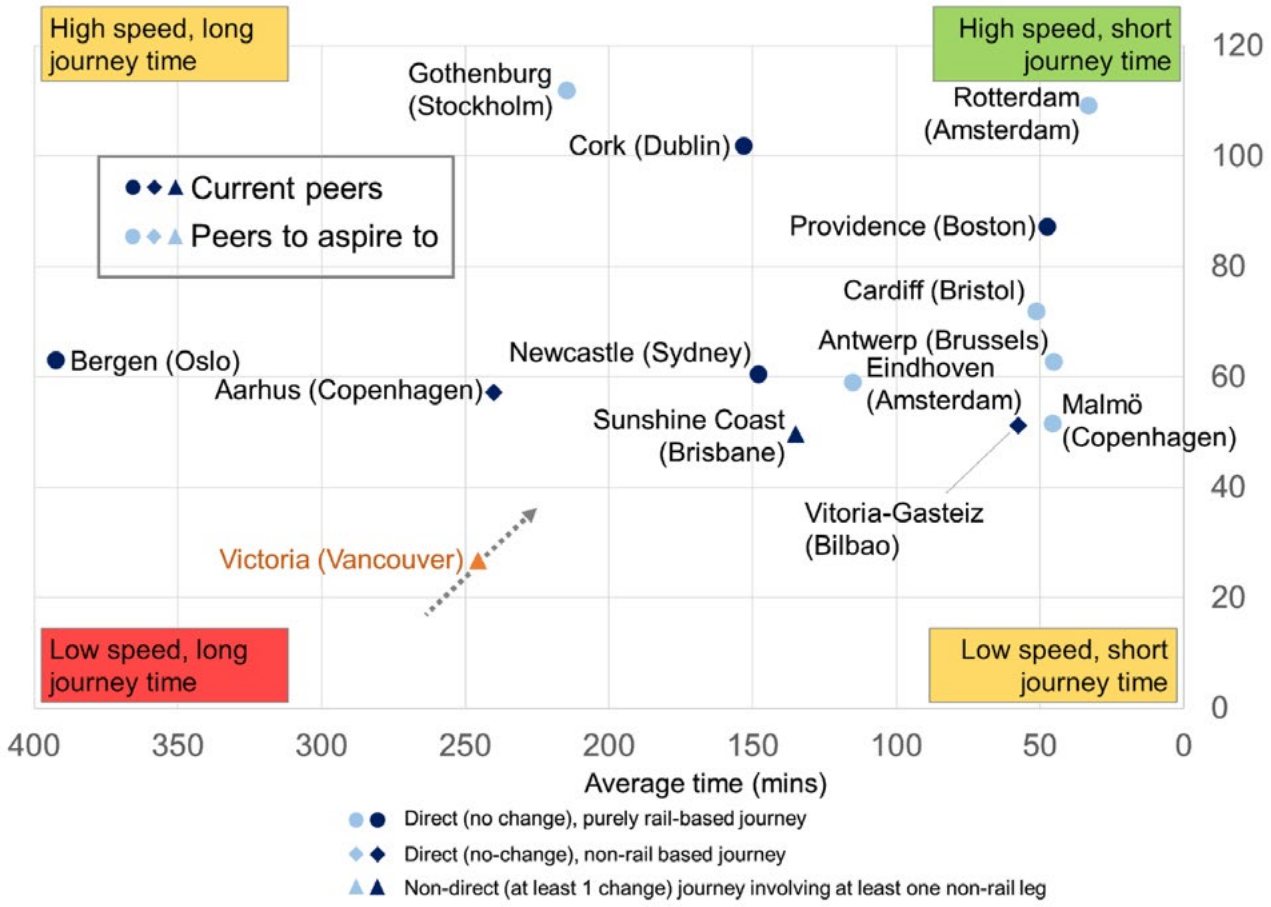


Figure 15: Internal connectivity with largest regional centre

Source: Google Maps. Measures time and speed from a defined central point/station in each region.

Greater Victoria's digital infrastructure appears to have room to improve relative to that of its peers. Fixed upload and download broadband speeds are still relatively slow by global standards. The region ranks 11th out of 12 major Canadian cities for its internet speeds and it is 12th among its wider peer group of 16.[28] While some parts of the region record fast upload and download rates, up to 60 and 120 mbps respectively, speeds are more uneven across the region than in other regions.[29] Although the region has 2 submarine cable landing points within a 100km radius, wider peer regions are on average located much closer to these access points.[30] Optimising connectivity will be key for Greater Victoria to become a more recognised leader in digital and 'contact free' industries.

5. Liveability fundamentals, amenities, and appeal

SUMMARY

Greater Victoria inherits very high living standards by global standards, which it can promote even more decisively to domestic and global employers and talent. Its temperate climate, excellent access to natural assets, low crime rate and healthy air quality combine to make it both an attractive destination to visit and to live in. Greater Victoria can champion its livability credentials and demonstrate an aspiration for global leadership.

Greater Victoria has historically relied on its visitor economy more than in other regions. Now, COVID-19 has shone light on the necessity for the region to diversify its economy and transition to the innovation economy to build resilience.

Barriers of affordability and access are larger than in other regions, and mean the region's inherited lifestyle qualities have not yet been fully translated into broad-based millennial appeal. The housing market is among the top 5% most unaffordable in the English-speaking world. Despite provincial and local efforts, more decisive action in order will be required in order to accommodate a growing population. The next cycle of Greater Victoria's development may require new tools to proactively manage emerging growth externalities such as these.

In this section, we have reviewed data on:

- perceptions of liveability, safety and environmental quality
- access to lifestyle and retail amenities
- crime rates
- exposure to air pollution
- visitor to resident ratios
- housing and rental market affordability.

Strengths

Greater Victoria benefits from high living standards by both global and national standards. For current resident perceptions, Greater Victoria ranks in the top 20 city-regions with the best quality of life, and in the top 5 small city-regions globally.[31] Victoria was also recently rated the 16th best small city to live in by Monocle's high-profile expert survey, due to the temperate climate, rich cultural life and emerging technology scene.[32]

Greater Victoria's high quality of life indicators are improving in terms of its clean and green natural environment. With the 2nd highest share of outdoors activities among its core peer group, Greater Victoria offers many opportunities for workers to pursue an active, outdoor lifestyle (see Figure 16). Meanwhile, according to real-time, crowd-sourced sentiment data, Greater Victoria ranks 6th globally for residents' perception of the overall quality of its environment, measured by light and noise pollution, cleanliness and perceived quality of green spaces.[33] In a post-COVID context, Greater Victoria communicates these strengths more widely, and achieves wider global recognition.

Elements of the region's amenity offer are also an advantage for younger people. In a global study of the concentration of certain millennial-friendly amenities, such as vegan restaurants, coffee shops, tattoo studios, vintage boutiques and record stores, Victoria places in the top 100, and in the top 30 among small regions. It also ranks 3rd among its core peer group and 4th among its wider peer group, ahead of Rotterdam, Gothenburg and Antwerp (see Figure 16).

A lower crime rate is an advantage for working-age families. Greater Victoria ranks among the global top 20 small city-regions for residents' perceptions of crime and safety.[34] Greater Victoria also fares well in Canada for crime severity.

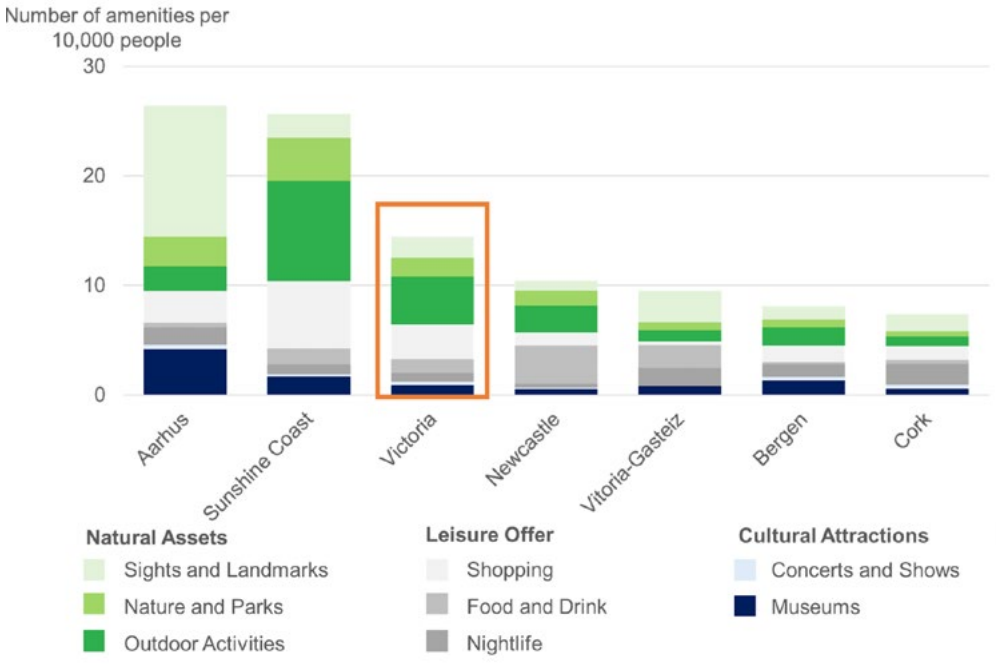


Figure 16: Access to variety of amenities

Source: TripAdvisor, July 2020 data. See appendix for details of methodology.

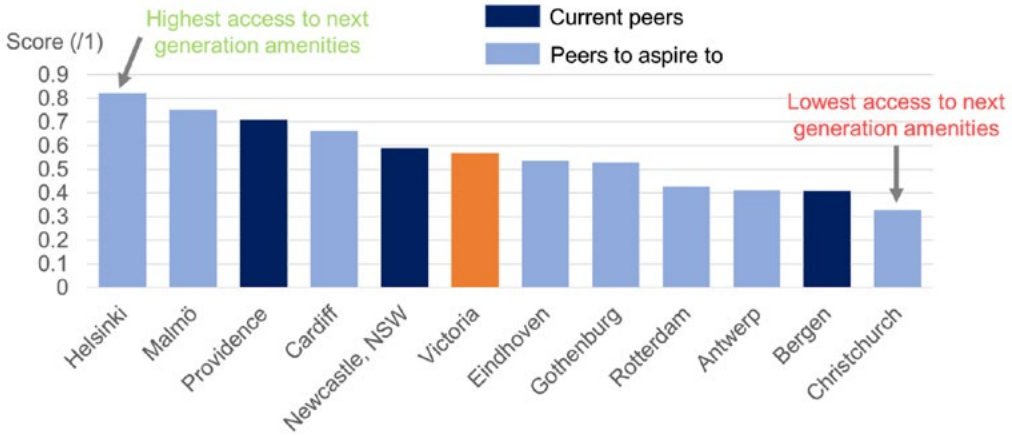


Figure 17: Access to next-generation in demand amenities

Source: MoveHub (2018 data).

Greater Victoria's low exposure to air pollution will become a more important advantage, but could be improved upon. In 2017, Greater Victoria had the 2nd lowest exposure to fine particulate matter (PM2.5) among its wider peer group (see Figure 18). At 5.4 µg/m3, this is significantly lower than the peer average of 8.3 µg/m3.[35] However, Greater Victoria also is measured as having the second lowest number of days where average air pollution is entirely in line with 'fresh air' guidelines. This performance should be explored in more detail as more consistent excellence would help Greater Victoria to achieve stronger global recognition for its environmental quality.

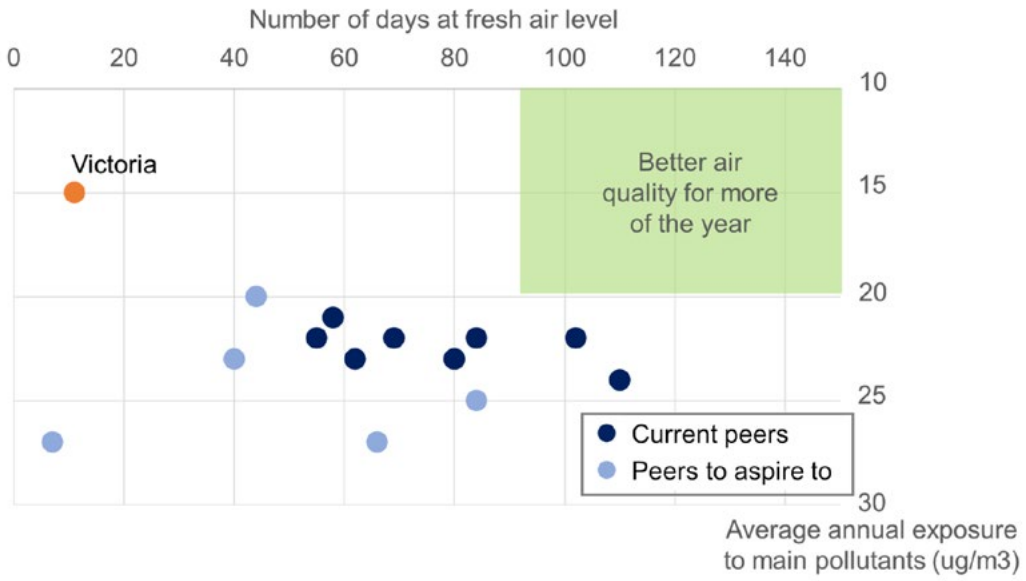


Figure 18: Average annual exposure to air pollution

Note: 'fresh air' level = average of < 20 ug/ m3. Main pollutants include PM 2.5, PM10, NO2 and O3.
Source: AQI Air Pollution. Functional urban area scale

Strategic challenges

Greater Victoria has, in relative terms, historically relied on tourism much more than other small peer regions. Prior to the crisis, it welcomed nearly 11 tourists per resident (10.7), more than core cities of established European destinations such as Porto (10.4) and Amsterdam (9.6) (see Figure 19). Moreover, 35% of Greater Victoria's visitors are international, the 2nd highest share among its core peer group. There is an opportunity post-Covid for Greater Victoria to re-imagine its visitor experience and align its visitor strengths with ambitions to grow its innovation ecosystem.

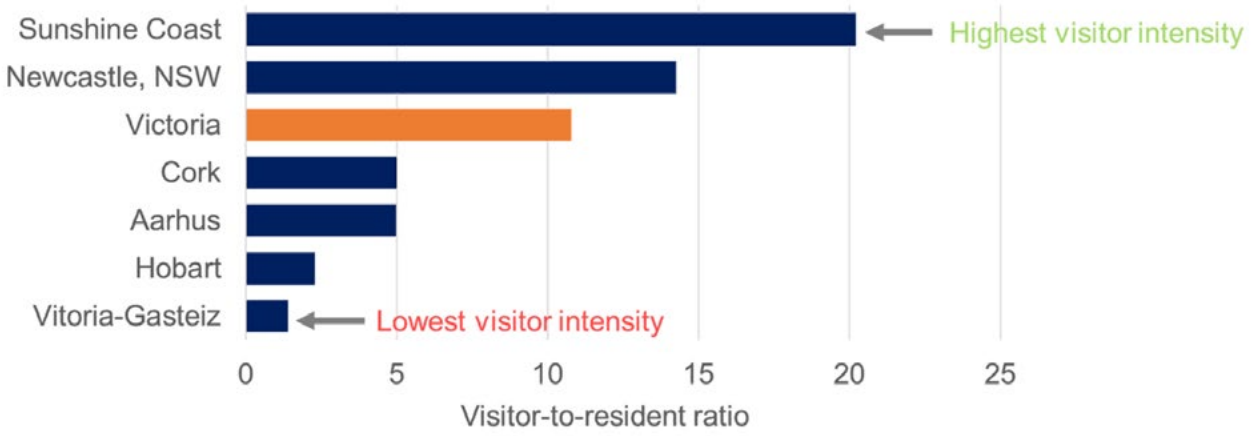


Figure 19: Visitor to resident ratio

Source: City and regional tourism agencies, latest available data.

Greater Victoria has one of the most unaffordable housing markets globally, which remains an important challenge to the long-term attraction and retention of top global talent. With a median multiple of 8.1, Greater Victoria is now among the top 5% least affordable housing markets in the English-speaking world. Among its core peer group, Greater Victoria is the second most unaffordable market, slightly behind Sunshine Coast (see Figure 20). The City of Victoria also ranks in the bottom 20% of its wider peer group for the cost of 1-bedroom flats to rent relative to the average monthly income, and it falls second to last for 3-bedroom flats to rent.[36] Importantly, the share of rental housing starts has increased by 11.5% between 2017 and 2019 and is more than double that of the Canadian peer city average, and more rental housing is being built now in Greater Victoria than at any time in the past 25 years.[37] Peer regions have been proactively prioritising a more flexible housing market with a wider range of tenures and co-investment sources and locations unlocked.

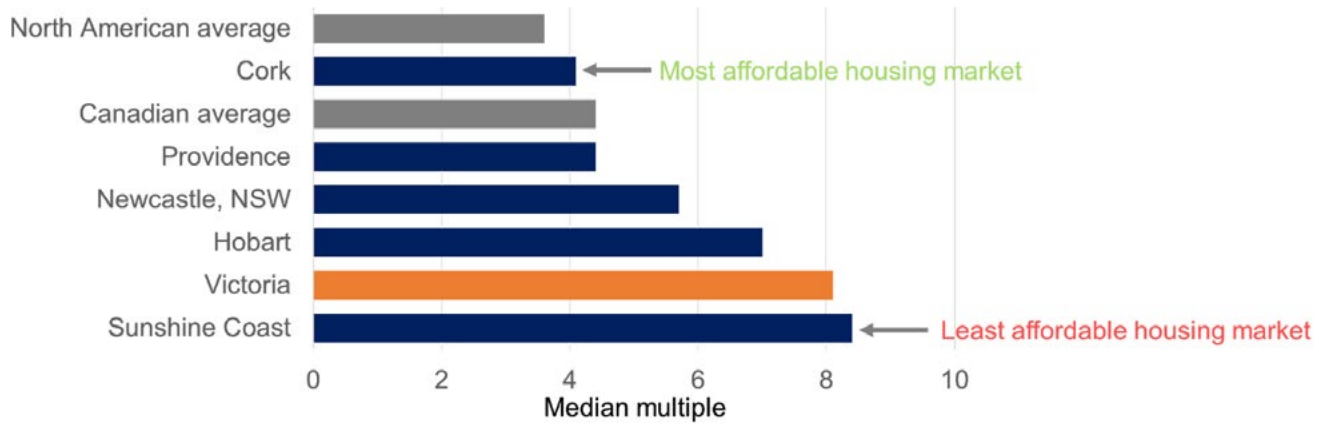


Figure 20: Median multiple housing affordability among English-speaking markets

Source: Demographia International Housing Affordability Survey 2020.
Note: Median multiple = median house price / median household income.

6. Health and sustainability

SUMMARY

Greater Victoria's health performance is a major advantage in terms of liveability and, in due course, reputation. The region stands out for having the highest life expectancy among its peers, and for its efficient and affordable healthcare system. Greater Victoria's residents appear more satisfied with the affordability and availability of healthcare than on average among peers.

Greater Victoria has been more successful at containing urban sprawl, but less successful at preserving its natural assets, relative to peers. Greater Victoria has been gradually becoming more land use efficient over the past decade. But although tree coverage remains high, Greater Victoria also has a very high share of artificial land surfaces, which may be a threat to environmental resilience. The share of natural land surfaces has also declined relatively rapidly, putting Greater Victoria in the middle of the pack relative to its peers.

Greater Victoria is already a relatively low carbon region and can become globally recognised for its ambition to reduce emissions even further. Greater Victoria stands out for its rapid uptake of green mobility solutions relative to its global peers. It has recently been recognised as one of only 105 'A list' cities that are leading the transition to a climate safe future, in recognition of its ambition to cut emissions by 80% by 2050. Victoria is one of only 3 peers among its wider group to have been recognised in this way. The next steps for Greater Victoria will include efforts to ensure that it follows through and delivers on this promise, and uses these ambitions to drive growth of the green economy.

In this section, we have reviewed data on:

- life expectancy
- perceptions of the affordability, accessibility and quality of healthcare
- urban sprawl
- preservation of natural assets
- uptake and deployment of electric vehicle charging stations
- CO2 emissions and reduction targets.

Health

Greater Victoria is a healthy region even by the high global standards set by its peers. It has the highest life expectancy among measured peer regions, with a life expectancy at birth of over 83 years old, higher than in Sunshine Coast and Newcastle. [38]

Victoria stands out among peers for its efficient healthcare system. The city features in the top 100 best hospital cities globally.[39] It scores highly for its physical and financial accessibility and is in the middle of the pack relative to much larger North American cities.[40] Greater Victoria's two largest hospitals, Royal Jubilee Hospital and General Hospital, both feature in Canada's top 15 hospitals. [41]

Existing data suggests Greater Victoria's residents are more satisfied with the cost of healthcare than elsewhere. Among its wider peer group, Greater Victoria's population is the 3rd most satisfied. However, among its wider peer group, the data shows that Greater Victoria has yet to reduce the waiting times in medical institutions to improve residents' satisfaction.[42]

Sustainability

Greater Victoria has been more successful at containing urban sprawl than its peers in recent years. Greater Victoria's built-up area expanded by around 3% between 2000 and 2014, nearly 1.5% less than on average among the region's wider international peer group. Taking into account population changes, Greater Victoria stands out as a city that has become more land use efficient, albeit at a slightly slower rate than some of the more rapidly densifying cities among its wider peer group (see Figure 21). However, as the region is still on a journey to achieve a medium-density development model, vigilance will be required in the next cycle as population grows to ensure the region continues to densify rather than sprawls.

Greater Victoria's efforts to preserve natural assets have on the whole been less successful. From 2004 to 2018, the proportion of natural land surfaces and tree covered areas declined by around 2%, putting Greater Victoria in the middle of the pack relative to its wider peer group for preservation of natural assets. Although over a quarter of Greater Victoria's functional urban land area remains tree covered, Greater Victoria also has the 3rd highest proportion of artificial surfaces among its peer group, at around 60%, which represents a long-term threat to the region's resilience to natural and climate change disasters. Greater Victoria has however been more successful than other Canadian regions at preserving its natural assets, with the 7th lowest relative decline in the proportion of natural surfaces among the nation's 26 metropolitan areas.[43]

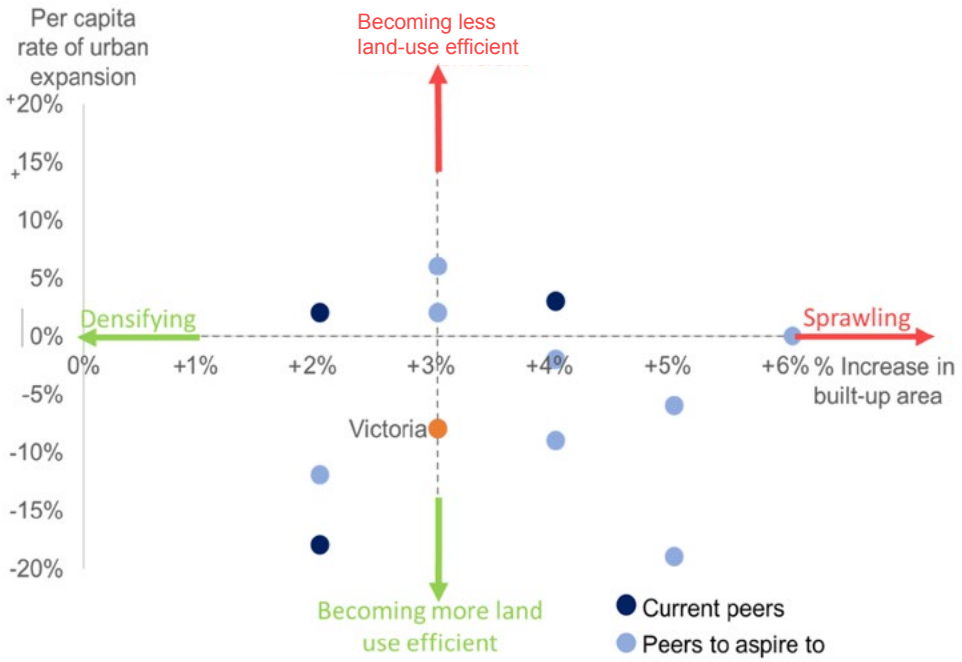


Figure 21: % increase in built-up area, absolute and per capita, 2000-2014

Source: OECD. *Functional Urban Area scale. *Excludes two outliers: Helsinki and Vitoria-Gasteiz.

Greater Victoria stands out for its rapid uptake and deployment of green mobility solutions. It ranks 2nd among its core peer group for the number of EV charging points per capita in the city region, only behind Bergen, or 3rd among its wider peer group, behind Rotterdam and Eindhoven.[44] Greater Victoria's performance is even more impressive in a wider regional and global context, featuring in the top 10 small North American city regions, and in the top 15 small regions globally.

Greater Victoria is, in general, a lower carbon intensity region than its peers. Current CO2 emissions are below 2 tonnes per capita, which is much lower than on average among most of Greater Victoria's measured peers (see Figure 22).[45] This is partly due to higher renewable energy consumption in Greater Victoria (61.1% in Greater Victoria versus 58.8% on average among Canadian peer city regions), and partly due to a higher mode share of non-car journeys (see also Section 4).[46]

Victoria is globally recognised for its low-carbon ambition and climate leadership. The City of Victoria's carbon emission reduction ambitions have recently been recognised by the CDP Open Data Portal – one of the largest global repositories of climate data – who have listed it as one of 105 cities that are 'leading the transition to a climate-safe future'. The city is recognised as an 'A list' city for its ambition of an 80% reduction in carbon emissions by 2050.[47] Only two of Victoria's peers, Malmö and Vitoria-Gasteiz, have been recognised in this way, suggesting that there may be an opportunity for Victoria to promote itself globally in this area.

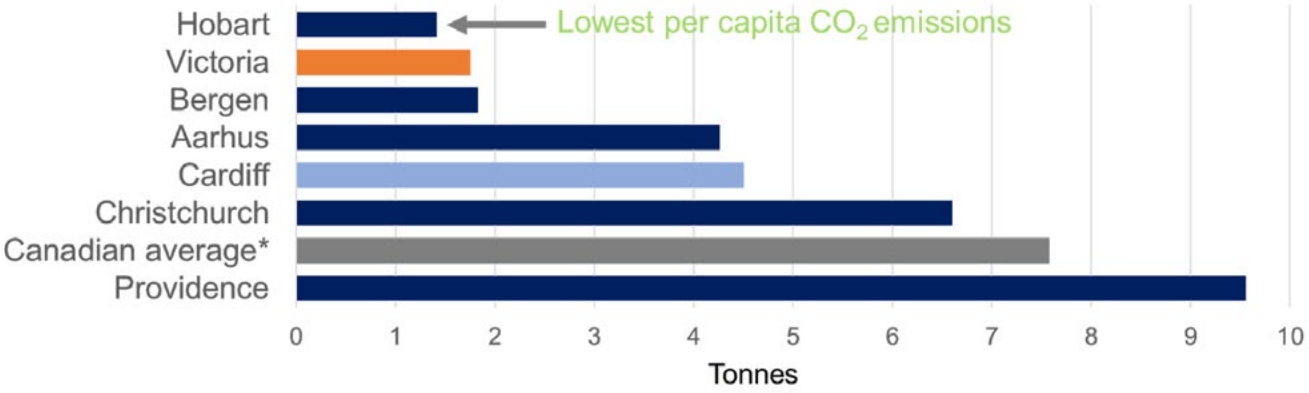


Figure 22: CO2 emissions per capita, Greater Victoria and selected peers, latest available

Sources: Local and national statistics agencies. *Canadian average = average among Canadian cities voluntarily signed up to the World Council on City Data. For Bergen, data is at the City of Bergen scale. For Cardiff, data is at the Cardiff Local Authority scale.

Appendix

A note on data scales and terminology

Wherever Victoria is mentioned, we are referring to Greater Victoria CMA, unless otherwise specified. All the other cities mentioned are also measured at the metropolitan/city-region scale, unless otherwise specified. When we refer to “small” city-regions, this means city-regions of less than 1m people.

We compare Greater Victoria as a region (population 367,770; area 696.15 sq.km.) to the scale which is most relevant in terms of population and land area, at which data are most readily available, and which reveals the most accurate competitive and comparative insights (see Table 1). The scales are:

- For Aarhus, Aarhus and 12 adjacent local authorities forming Aarhus Business Region (994,050 ; 5,840 sq.km.)
- For Bergen, Greater Bergen Region made up of Bergen and 8 other local authorities (425,000 ; 166 sq.km.)
- For Cork, County Cork (542,000; 7,500 sqkm)
- For Hobart, Greater Hobart (240,000 ; 1690 sq.km.)
- For Newcastle, the City of Newcastle and the 4 adjacent local authorities: Port Stephens, Lake Macquarie, Cessnock and Maitland (577,000; 4,175 sqkm)
- For Providence, Providence Metropolitan Area (1,621,000 ; 4,240 sq.km.)
- For Sunshine Coast (319,000; 2,250 sqkm)
- For Vitoria-Gasteiz, Vitoria-Gasteiz (249,000 ; 277 sq.km.)

The different data scales for specific indicators and datasets

Competitive Criteria	Scale
Productivity	OECD metropolitan area
Productivity compared to regional hub	Victoria CMA
Industry employment mix	Victoria CMA
Higher education attainment	Victoria CMA
Past and future population growth	UN-defined built-up area
Population age structure	Victoria CMA
Innovative firm activity, performance and specialisations	Victoria CMA
Share of FTE and remote job postings	TBC
Built-up area density	OECD-defined built-up area
Downtown scale and density	Downtown Greater Victoria
Spatial dynamics of innovation ecosystem	Victoria CMA
Housing stock, dwelling type and homeownership rate	Victoria CMA
Commute time	Victoria CMA
Modal split	Victoria CMA
Airport and internal connectivity	Victoria CMA
Internet speeds (global comparison)	Weighted average across main settlements in Victoria CMA
Access to variety amenities	Weighted average across main settlements in Victoria CMA
Air pollution exposure	OECD functional urban area
Visitor to resident ratio	TBC
Housing unaffordability	Demographia-defined built-up area
Life expectancy	Victoria CMA
Change in built up area	OECD functional urban area
Land coverage	OECD functional urban area
EV charging infrastructure	25km radius from city centre
CO2 emissions	Victoria CMA
Renewable energy consumption	Victoria CMA

Table 5: Data scales for indicators and datasets

Definitions based on Crunchbase

Globally influential: No. of innovative firms ranking in the top 10,000 globally on aggregate in Crunchbase's database of over 850,000 firms that have a high technology quotient, are recognised in global media as having innovated in terms of product or process in the past 12 months, or have experienced significant VC investment (ranking based on an aggregate score across measures of firm activity, online and media visibility, investment momentum, etc.)

Rapidly scaling ecosystem catalysers: No. of innovative firms ranking in the top 50,000 globally on aggregate in Crunchbase's database of over 850,000 firms that have a high technology quotient, are recognised in global media as having innovated in terms of product or process in the past 12 months, or have experienced significant VC investment (ranking based on an aggregate score across measures of firm activity, online and media visibility, investment momentum, etc.)

Promising mid-size: No. of innovative firms ranking in the top 100,000 globally on aggregate in Crunchbase's database of over 850,000 firms that have a high technology quotient, are recognised in global media as having innovated in terms of product or process in the past 12 months, or have experienced significant VC investment (ranking based on an aggregate score across measures of firm activity, online and media visibility, investment momentum, etc.)

Early stage start-ups: No. of innovative firms ranking outside the top 100,000 globally on aggregate in Crunchbase's database of over 850,000 firms that have a high technology quotient, are recognised in global media as having innovated in terms of product or process in the past 12 months, or have experienced significant VC investment (ranking based on an aggregate score across measures of firm activity, online and media visibility, investment momentum, etc.)

The core data sources used in this report include:

- census data, including census profiles and the National Cities Performance Framework, and equivalents in other national systems.
- data from regional health, tourism and airport agencies
- global comparative reports and datasets (e.g. Brookings Global Metro Monitor, Demographia World Urban Areas report, Times Higher Education, OECD Functional Urban Areas database)
- web platforms and apps (e.g. McKinsey Urban World app, Indeed, Crunchbase, co-worker.com, TripAdvisor, Google Maps and testmy.net).

Notes to individual figures:
Overall performance spidergram:

- Each of the 8 overarching themes (see below) comprise multiple indicators. For each theme, the relative positions (1-7) of the city-regions in relevant indicators were analysed in an Elo algorithm. Designed as a Chess tournament ranking system, the Elo Rating System rates cities or regions by comparing their performance in every possible permutation against a list of other cities/regions. The system produces the most accurate comparative assessment of city/region performance, as it accounts for the fact that some cities/regions may appear in more comparative studies than do others, and that each ranking measures a different number of cities.
- The 7 regions were ranked 1-7 by their algorithm score so that every region had an overall ranking for each theme (7 for 1st place, 1 for 7th place)
- Where Victoria was ranked joint with another city for a theme, a median score was awarded for that theme

Indicators:

Innovation economy and spaces: Number of co-working spaces per 10,000 population, number of incubators and accelerators per 10,000 population, number of innovative tech firms.

Knowledge economy and skills: % employment in knowledge intensive business services, university performance, % HE attainment.

Smart strategies and land use: Extent and embeddedness of smart development strategies, % increase in built-up area footprint, 2000-2014.

Efficient and sustainable mobility: % of trips to work by car, mean commute time.

Liveability fundamentals: Life expectancy at birth, exposure to air pollution, median multiple housing affordability.

Amenities and appeal: Visitor numbers, access to variety amenities, access to next-generation, in-demand amenities.

Connectivity: Connectivity to/from regional centre (time), connectivity to/from regional centre (speed), current air passenger throughput (primary airport), forecast air passenger throughput (primary airport), internet speed.

Productive density and spatial form: Wider CBD residential density, population density (regional scale), population density (built-up area scale), share of wider CBD as % of regional population.

Figure 3, on sectoral economic activity

Aggregated sectors, where they do not directly overlap with Canadian classification system, include the following nationally recognised sectors:

Retail and wholesale trade: retail trade; wholesale trade

Finance, insurance, real estate, rental and leasing: financial and insurance services; real estate, rental and hiring services

Business, building and other support services: administrative and support services

Public administration: public administration and safety

Information, culture and recreation: information, media and telecoms; arts and recreation services

Agriculture and mining: agriculture, forestry and fishing; mining

Utilities: electricity, gas, water and waste services

Table 2 – on top firms and % of full-time jobs

Data scales used:

Exact location only: County Cork

25km radius: Victoria, Hobart, Sunshine Coast, Cardiff

50km radius: Newcastle, Christchurch

Figures 6, 7 and 8 – on innovative firm activity

We attributed the following terms based on Crunchbase's measure of all-round firm influence (global rank), which considers revenue, acquisitions, web and media traffic, patents and trademarks, etc.:

- Start-ups = ranked outside global top 100,000
- Rapidly scaling = ranked from 50,000 to 100,000
- Promising mid-size = ranked from 10,000 to 50,000
- Globally influential = ranked within global top 10,000

Sectoral innovation strengths were calculated using Crunchbase data on the total number of innovative technology firms in the region. To correct for the fact that many firms span more than one category, we counted all the categories assigned by Crunchbase to a given firm (e.g. a financial firm specialising in digital payments would result in a mention for finance, digital technology and payments). All Crunchbase-assigned categories that were too vague were discounted (e.g. "security", "service industry", "internet") from the analysis at this stage.

All categories were then organised into 8 broad category groups, giving a total number (total across all category groups and for each group) for all comparator regions. We calculated the share of each category group as a percentage of total innovative firm activity for each city.

Greater Victoria's relative strengths and weaknesses were calculated by comparing the percentage for each of Greater Victoria's 8 category groups to that of the average among comparators, and then correcting for relative differences between the groups by dividing by Greater Victoria's deviation from the average in each case.

Page 33 – on infrastructure projects

Greater Victoria: Wastewater Treatment for Regional Capital District

Aarhus: Port Renovation

Bergen: New highway and suspension bridge (E39 Coastal Highway Route)

Cork: Macroom Bypass

Hobart: Bryn Estyn Water Treatment Plant upgrade

Newcastle: Newcastle Power Station

Providence: Northbound Providence Viaduct Improvements

Sunshine Coast: Bruce Highway Upgrade: Cooroy to Curra, Section D

Tallinn: International Airport Expansion

Rotterdam: A16 Motorway project

Gothenburg: Gothenburg-Boras project

Malmo: Lund-Arlov railway upgrade

Cardiff: South Wales Metro

Antwerp: Ringland project

Page 34 – on internet speeds

For internet speed, average regional internet speeds were calculated by taking weighted averages based on the relative population sizes of the major centres for which data was available.
Localities: Saanichton, Sidney, Sooke, Victoria

Figure 15 – on access to amenities

For access to attractions, regional intensity was calculated by summing all attractions listed in the major centres for which data was available (see below for major centres with data available for Victoria).
Localities: Langford, North Saanich, Saanichton, Sidney, Sooke, Victoria

Table 3 – on wider CBD characteristics

Localities included in the 'wider CBD' include:

Bergen: Sentrum

Eindhoven: Centrum

Helsinki: Vironniemi

Hobart: Hobart City Centre

Malmö: Malmö Sankt Petri

Newcastle: Newcastle, Newcastle East, Newcastle West, Cooks Hill, The Hill, Hamilton South, Hamilton East, Junction

Providence: Downtown, Federal Hill

Rotterdam: Centrum

Sunshine Coast: Maroochydore Activity Centre Profile Area

Vitoria-Gasteiz: Casco Viejo, Ensanche, Lovania and Coronacion

Greater Victoria: Downtown Victoria

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23 Census and transport agency data, latest available. Core peers included are: Cork, Hobart, Providence, Sunshine Coast, Vitoria-Gasteiz. US average data from https://datausa.io/profile/geo/united-states

24 Census data, latest available. Core peers included are : Aarhus, Bergen, Cork, Hobart, Providence, Vitoria-Gasteiz, Sunshine Coast. Wider peers included are: Antwerp, Gothenburg, Helsinki and Malmö.

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The Business of Cities is an urban intelligence firm that works with cities and companies worldwide. It uses advanced benchmarking and comparative analysis to help leaders to respond purposefully to the twin dynamics of urbanisation and globalisation. Over the last 10 years it has supported public and private leadership in cities and regions such as Amsterdam, Auckland, Glasgow, Helsinki, London, Oslo, Philadelphia, San Diego, Sydney and Tel Aviv, and collaborated closely with international organisations such as the OECD, World Bank and Brookings Institution.

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The Business Of Cities

Report 2
May 2021

Case Studies in Economic Transformation and Change

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Executive summary

Around the world other small city regions demonstrate approaches that can help Greater Victoria shift towards a more productive and resilient future. These precedents are relevant to Greater Victoria's future choices about how to emerge from COVID-19 confidently, pivot into a higher value economy, maintain good growth, extend the lifestyle advantage, and coordinate as a single outward-facing region.

This paper reviews more than 20 case studies from other smaller and medium sized city regions across Europe, North America and the Asia Pacific that illustrate a specific element of a journey that these places have gone on to shift purposefully into a new gear. They have been selected because of their relevance to Greater Victoria's current assets and opportunities. The 10 themes are:

1. **Disaster recovery as an opportunity for longer-term economic transition: Christchurch, New Zealand; Hong Kong and Barcelona, Spain**
2. **COVID-19 responses that see regions pursue opportunity to accelerate wider changes: Amsterdam, Netherlands and Busan, South Korea**
3. **High value economic transition to reconfigure reputation and raise economic resilience: Miami, USA and Aarhus, Denmark**
4. **Ecosystem development to create new high skilled jobs and improve productivity: Malmö, Sweden and Helsinki-Espoo, Finland**
5. **Innovation districts as a venue to co-locate firms and build identity and destination pull: Eindhoven, Netherlands and Auckland, New Zealand**
6. **Anchor institutions to foster the scale and skills to participate in the innovation economy: Boulder, USA and Newcastle, Australia**
7. **Economic development initiatives to more widely share the benefits of growth: Auckland, New Zealand and Nashville, USA**
8. **Ocean, marine and port clusters that build specialisation and differentiation: Hamburg, Germany; Bergen, Norway and Antwerp, Belgium**
9. **Multi-city collaboration in a region to borrow scale and sharpen complementarities: Malmö/Copenhagen and the Holland Metropole (Amsterdam/Rotterdam/The Hague/Utrecht/Eindhoven)**
10. **Enhanced systems for regional economic organisation and delivery: Miami, USA; Amsterdam, Netherlands; Stockholm, Sweden and San Diego, USA**

Specific implications for each of the ten themes are observed in each of the 10 sections of the main paper below.

Overall the international case study experience points to seven approaches that others have prioritised in order to drive positive change across multiple strategic priorities, and which are relevant to Greater Victoria:

1. **Treat crisis as opportunity.** In the past and present, city regions have shown that periods of crisis are times of acceleration and reset — when two or more cycles of change are condensed into one cycle - and that advantages accrue to places that confront crisis on the front foot. Opportunities to revisit the industry mix, grow the digital economy, rethink the potential of city centres and public spaces, adapt land uses, experiment with new urban technologies and services, and change how locals and those far away see Greater Victoria, can all be captured. A crisis like COVID-19 creates a higher reputational flux for cities, and the challenge for Greater Victoria is to move quickly and show it can provide what the world now wants from cities — local lifestyle, 15 minute city living, safe systems, services on demand, a strong social contract, cutting edge innovations, meaningful jobs, and climate change responsibility.

2. **Maximise the ambition for Downtown,** especially after COVID-19. City regions of Greater Victoria's calibre have continued to find that maximising the residential population and customer base in Downtown is one of the most important tools to simultaneously promote liveability and 'stickiness' for talent, host more of the Innovation Economy, promote a region's assets and identity, pioneer a smarter and more responsive urban environment, enable anchors and institutions to succeed, and animate the public and private sectors around mutual goals and a shared vision. Downtowns after COVID-19 will be different, with city regions recognising they will consist of more specialised and digitally enabled locations, full of convivial and civic uses, with more built-in flexibility, many more kinds of active mobility, and high quality placemaking with the capacity to inspire.

3. **Turn knowledge assets into a whole region advantage.** Smaller city regions that have been shifting to a higher value economy have found more routes to optimise the contribution from their knowledge producers. These include building upon the expertise and buying power of existing university and research institutions, developing knowledge partnerships around social and innovation missions, recruiting other education functions, and promoting university-anchored precincts with real porosity with business. The strategic relocation of post-secondary institutions into the region's core is also often a key dimension of this shift, as these institutions develop a consciousness of their interdependence with the region's success.

4. **Elevate the scale and expectations of public-private co-ordination.** Small city regions featured in this paper have realised that without a high trust and high partnership equilibrium, they cannot compete with regions with deeper pockets and larger talent pools. Shifting beyond zero-sum mindsets, and recognising the shared value of a 'whole neighbourhood' or 'whole region' appeal, has been key — whether for local governments, for landowners within business locations, or for companies used to doing business their way. These regions have built organisations and digital platforms to start to work together more systematically and become better-informed and more agile in decision making. Private sector engagement, partnership and leadership has been increasingly core to the success of economic strategy delivery, an innovation district, and neighbourhood place making and place management. Over time the role of public policy tends to shift towards monitoring, fostering, and flexibly supporting the most promising activities, rather than designating, predicting and sole-funding.

5. **A shared language for success.** These city regions have realised that if they are to prioritise investment and productivity, and attract capable companies and catalytic opportunities, they need a sharper collective identity, and a clear and consistent message that communicates the region's appetite for its own economic future and its role within a larger competitive region. For these regions, the voices championing the future are mainstream, and the story is well known. They have used their region's small size as a point of difference, pride, unity, agility and competence.

6. **Be vigilant about the cycle after this one.** The city regions in these case studies have learnt they have to be ready for more than one initial spike of success. Otherwise they will quickly lose the ingredients that made them desirable, and erode the social licence to maintain their success model. This not only means that physical development has to serve the amenity and affordability needs of families and workers. Nor does it only mean proactive protection of natural assets as growth pressures arise. It also means inventing new tools and approaches to deliver on more agendas at once: transport, innovation districts, investment promotion, business environment interface, skills, procurement, and governance reform. The ability to make incremental and continuous improvements later is just as important as the initial leadership catalyst.

7. **Host the world.** A high-value economy also means going after and being receptive to a different orbit of opportunity. Conventions, summits and events oriented to high value business, decision-making, leadership and futures have helped to build reputations of places in which to invest, innovate and conduct business. The role of art, culture and global values and institutions as drivers of this high value shift is also clear. For other city regions, the presence and endorsement of international leaders and influencers has resulted in improved know how and confidence of the existing business base, as well as improved ability to attract opportunity to the region.

1. Disaster recovery and economic transition

Emerging lessons for Greater Victoria:

The shock and severity of COVID-19 should continue to galvanise the region to face up to the imperative to diversify the economy, audit its underlying assets, and accelerate with key infrastructure and district projects.

Speed, agility and purpose are key to a successful regionwide recovery effort, particularly in the first 12 months – 1 or 2 core projects are important to channel the impetus.

Crises create the chance to sustain broader non-partisan alliances. Collaborative governance in the post-crisis cycle is about raising the standards of what is delivered and how.

Unity, competence and ambition are powerful assets to communicate when attracting international opportunity to the region. The success of the crisis response should underpin a renewed sense of confidence among public and private sector leaders to compete and succeed globally.

Diversification and specialised precincts after crisis – Christchurch, New Zealand

Christchurch, New Zealand, was hit by a series of earthquakes between 2010 and 2011 that damaged more than 90% of the City and caused over NZ$40bn (CA$35bn) of damage.[1] The City and the national government worked together to fast-track recovery process in three ways:

1. **Institutionalising recovery in existing planning processes.**
2. **Creating a new cross-sector leadership entity to oversee implementation of new anchor projects.**
3. **Taking steps to ensure that public and indigenous voices guided the recovery trajectory.** A Fast-Track Recovery: Anchor projects and Economic Diversification

Participatory planning and a focus on strong community engagement provided the social licence for an ambitious globally-facing recovery process. To fast track rebuilding the city, the Canterbury Earthquake Recovery Act (CER) passed in February 2011, mandating Christchurch City council to develop a Recovery Plan, adopted within 9-months of the legislation.[2] The Plan enhanced public participation, drawing over 106,000 ideas from residents through web-based participation, in person conferences, public workshops, and stakeholder meetings. All plans relating to recovery targeted indigenous communities, by making their leaders part of the expert group governing the process, and by using traditional language as part of the documents.

Anchor Projects and planned economic precincts facilitated and concentrated public and private investment to aid recovery. Infrastructure projects were designed to anchor 11 new identified precincts, each built around sectors that would also help to foster economic diversification (see Figure 1). These included public benefit projects (parks, libraries, and public space) as well as those designed to build local capacity (commuter rail, convention centres).

Public investment also enabled the creation of the SALT district, a concept driven by local investors, businesses and authorities targeting engineering, technology, and research-based industries.[3] This piloted a new kind of place activation, including community-funded murals and a permanent street art exhibition. The project won best major place project at the Asia Pacific Place Leaders awards, because of the success in encouraging owners and stakeholders to stop acting as separate entities and start becoming a cohesive neighbourhood with shared values. A charitable trust for SALT has since been formed to give a strong platform to facilitate future events and activities.

As a result of this more spatially-attuned mindset, investors and civic leaders have since developed a much clearer consciousness about 6 or 7 hyperlocal communities and what makes each neighbourhood unique in and around downtown. Forming a public-private partnership, they have attracted investment into events and projects that provide experiences that draw locals and tourists. They have helped raise the bar for new development and public realm, so that Christchurch aspires to the standards of international cities like Melbourne or Milan, and does not accept lower calibre outcomes.

Figure 1: Planning for Recovery through Economically Themed Precincts (L); SALT District in Downtown Christchurch (R)

Source: Adapted from Wikipedia and Otakaro Ltd. [4]

SCIRT: A public-private governance entity to fast-track recovery projects.

Part of the strategic recovery process included the creation of two separate entities to rebuild faster and more cost-efficiently: the Canterbury Earthquake Recovery Authority (CERA) and Stronger Together Infrastructure Rebuild Team (SCIRT) .[5] In particular, SCIRT was a collaborative coalition of public and private sector organisations that were incentivised to cut costs by working together to rebuild publicly owned infrastructure. The payment model incentives adopted a pooled system of profits, where the difference between target cost and actual cost was added to a shared pot to be divided by the contractors based on their work share.[6]

Facing globally and seizing catalysts after economic crisis – Barcelona, Spain

Barcelona has always been a centre of Mediterranean trade. But by the late 1970s, the city was beset by unemployment, a decaying physical environment, and cultural decline: between 1970 and 1985, it lost 42% of its industrial jobs and 69% of its construction jobs.[7]

Communication of global orientation and ambition to build confidence

In the early 1980s, upon Barcelona's return to democracy but at the peak of the economic crisis, the city and surrounding municipalities formed a powerful Metropolitan General Plan to pursue a more attractive urban development model. Under the pragmatic and inclusive leadership of Pasqual Maragall, the mayor from 1982 to 1997, the city council's administrative structure was reformed to deliberately communicate its global orientation and ambition, distinctive Catalan culture and style and cosmopolitan openness.[8]

Maragall built a positive new vision for the city, fostered productive relationships with trade unions, civil society and businesses, who became more collectively invested in high-quality urban and waterfront design. In the post-crisis window, he and other leaders successfully convinced the influential decision-makers, designers and developers to endorse the role that art, architecture, design, and sport could play in capturing the imaginations of local and international audiences. [9]

The catalyst for re-invention and partnership

The award of the Olympics in 1986, in the same year as Spain's accession to the EU, proved to be a defining moment in Barcelona's transformation.

Figure 2: Barcelona's Olympic Stadium and surroundings, before and after the Olympic Games

Source: Barcelona City Hall [10]

Not only did it trigger a historic cycle of investment in the built environment, telecommunications systems and airport connectivity, but it also strengthened the region's self-confidence. A special urban development apparatus was established to carry out related urban improvement works. This allowed Barcelona to eliminate the rail line that separated the city from the sea, helping to activate new urban areas close to the waterfront. Improvements to the city's road and sewerage infrastructure, together with new public spaces, proved critical in generating incentives for private investment, especially in the tourism sector.[11]

Overall, the Olympics not only helped to enable a collaborative ethos to be forged between the public and private sectors, but also encouraged business to become a much more active investor and leader in the region, spearheading new kinds of placemaking. The establishment of both Barcelona Activa, a cutting-edge development agency, and Barcelona Global, a business leadership group dedicated to attracting international talent to the city, reflected the city's new proactive mindset. Barcelona became an established and more diversified destination for media and the arts, education and tourism, and began its shift into innovation and entrepreneurship into the 1990s and beyond.[12]

Mobilising business to lead after crisis — Hong Kong and SARS

In the late 1990s and early 2000s, Hong Kong's economy faced the triple burden of political uncertainty relating to constitutional changes, the Asian financial crisis, and the SARS outbreak. A purposeful response from the business community as well as from government helped the city to bounce back quickly.

In April 2003, the city welcomed fewer than 500,000 visitors, a 65% drop on the same period the previous year, and in May, hotel occupancy rates stood at 15%, down from 82%.[13] Government forecasts assessed the overall economic impact at $2bn per month.[14]

Hong Kong responded quickly and purposefully, aligning government efforts with those of business leaders, who stepped up to marshal the recovery effort by:

1. **Spearheading a three-phase recovery plan designed to instil investor and visitor confidence**
2. **Stepping up connectivity improvements to become a gateway to larger regional markets**
3. **Accelerating diversification from finance to culture, through campaigns and development**

3-phase recovery plan to re-instil confidence

Almost immediately after the outbreak, the Hong Kong General Chamber of Commerce launched a 3-phase plan to support "Business After SARS", with 5-week, 5-month and 5-year time horizons:[15]

- **5 weeks (re-invigorate): reinforce Hong Kong's capacity to bounce back from the crisis through consensus and confidence building**
- **5 months (re-launch): communicate hygiene and safety, target business travellers and high-end customers, highlight regional assets**
- **5 years (re-build): lay groundwork for sustained, longer term effort to improve quality of life and confront structural issues with a view to strengthening future resilience**

Connectivity improvements to grow gateway status

Together, the Hong Kong government and business leadership sponsored a new cycle of development and vigorously asserted the city's credentials as an interface with China. The Chamber of Commerce launched a campaign following the financial crisis to enter into a free-trade agreement with Mainland China, signed in 2003.[16] Meanwhile the government launched the Individual Visit Scheme, allowing travellers from mainland China to visit Hong Kong and Macau on an individual basis as opposed to on business visas or on group tours, for the first time.[17] The scheme began a 15-year surge in the number of mainland visitors and a big rise in B2B relationships.

Diversification from finance to culture and soft power, through campaigns and outreach

Business-sponsored campaigns and outreach were also a significant part of the recovery effort. The "Asia's World City" brand that was created endured for well over a decade. The Hong Kong Tourism Board kickstarted a 9-month marketing response, including a "Hong Kong Welcomes You" package of travel incentives and shopping discounts, and TV and advertising campaigns featuring well-known celebrities and ambassadors.[18] West Kowloon Cultural District was also begun as a way to develop a more rounded offer and reputation.

2. COVID-19 responses

Emerging lessons for Greater Victoria:

COVID-19's public health crisis and focus on long-term resilience is seeing gains start to accrue to city-regions that proactively capture the opportunities to build their international reputation for safety, proficiency, climate change adaptation, environmental stewardship, and the green economy.

Digital tools and platforms are becoming more important to unlock civic innovation and better-informed decision making, as well as to enhance collaboration and information-sharing between the public, private and civic sectors.

Multi-level government co-operation is likely to become a more decisive element of the next cycle. The inclusion of scientists, private businesses, religious leaders and other community leaders in decision making processes, can help to enhance trust as well as decrease financial risk.

Forward thinking — Amsterdam's response to COVID-19

Amsterdam has quickly established itself as a leader in how to safely reopen different economic sectors. But what has really set the city apart is its appetite to use the public health crisis as an opportunity to push for innovation and longer-term changes to address underlying local issues.

An Inclusive Local Government Response

City and metropolitan officials have made sure to include city residents in the recovery process, connecting them to public services and each other through curated online platforms. For the short term the city created its own emergency fund of 50m euros ($77m CAD) to provide access to internet and provide relief for certain affected businesses – especially arts and culture companies -(via waivers of advertisement taxes, terrace taxes, fees for markets etc.), as well as funding for individual art projects.[19] The city also quickly saw the value of creating interactive platforms for citizens to cooperate, promote local initiatives, connect with each other, and of partnering with business and investment agencies to allow startups to continue receiving seed funding.[20]

Long-Term Outlook: Using Crises to Restructure and Innovate

Prior to COVID, the tourism industry was one of the main pillars of the city's economy, bringing in more than €6 billion ($9.2 billion CAD) a year, although concerns of over-tourism and loss of character from low value tourism had grown. As soon as tourism flows came to a halt, the Mayor and other officials, in collaboration with residents and businesses, took the opportunity to strengthen industry regulation, for example through tightening licensing requirements and limiting the number of available licenses for peer-to-peer vacation rentals, and enforcing a ban on stores catering solely to tourists.[21]

The pandemic has also spurred the city's efforts to shift into the Circular Economy. Its 2025 Circular Strategy is moving from aspiration to concrete initiatives in using circular principles to production and consumption in order to drive job creation in high tech and innovation sectors. (See "Amsterdam City Donut" below).

The built environment is one of three pillars of the approach (along with food supply chains and consumer goods). Amsterdam is using its role in spatial planning to influence precinct design, grant construction permits, commission public space, and cooperate with business and developers. Amsterdam is also exploring adjusting land fees or levies. Specific changes include:

1. **Setting stringent circular criteria** for new and existing buildings in key precincts: building with fewer materials, building with reused and/or biobased materials, and adaptive and modular construction.
2. **A circular procurement policy** for public space, public land and buildings, schools, land allocation tenders, and renovation of private and social housing, that challenges the market to innovate.
3. **More financial instruments and incentives** to use recycled and reusable materials, and adoption of a whole life cycle approach to assets.[22]

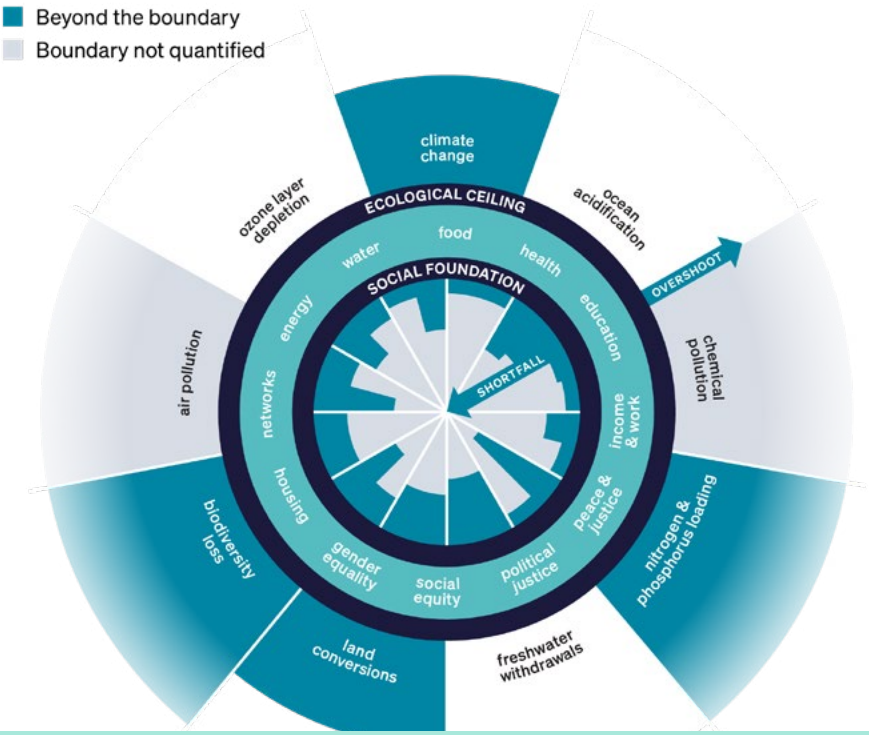

Figure 3: Amsterdam's new circular economy "doughnut" strategy, adopted during COVID-19

Source: Inhabitat. [23]

Rapid response and positioning as a demonstrator — Busan and COVID-19

Busan, South Korea's second city, not only managed to implement a two-track emergency response system to implement quarantine and curb economic impact.[24] It also embarked on a new level of collaboration between government leaders, scientists, financial actors and the wider region to form a bold and urgent response to wider economic agendas.

First Track: Collaboration and Consensus Building at all governance levels

At the local and regional level, Busan created several teams to enact its "Test, trace and Isolate" protocol under one umbrella: the Busan Disaster and Safety Countermeasures Headquarters. To help streamline local and regional efforts, several Busan·Ulsan·Gyeongnam Joint Video Conferences were held, allowing the different local agencies to quickly establish a joint response system at the metropolitan level, including through embedding COVID-19 information sharing early on in the response.[25]

Second Track: Mitigating the downsides through clear financial planning, local incentives and certification schemes

The city of Busan also quickly created an Emergency Economic Recovery Response Headquarters to facilitate collaboration between the public and private sectors and enhance public trust. To boost the economy and minimise the threat to local companies, Busan also:

- Protected SMEs by signing a joint agreement with BNK Busan Bank to extend loan maturity dates, applying special interest rates and providing an emergency fund to local business owners of 100 billion KRW irrespective of credit ratings.[26]
- Created its own local currency, only usable in the city, to enhance local spending. The Local currency, available by preloading a card of mobile app with national currency, the local currency provides a 6% cashback reward upon payment, designed to spur local demand and spending.[27]
- Launched the Busan Clean Zone Business certification scheme to reaffirm confidence among investors and visitors, revitalise small and micro businesses in neighborhoods, and ensure that companies could continue trading.[28]

Third Track: Using COVID-19 to prioritise other public policy and change agendas

To continue economic growth and create a path towards the future, Busan metropolitan government is now strengthening partnerships with business to upgrade city systems and industry competitiveness. In particular it is prioritising investment in clean energy[29], efforts to enhance the port and foster competition and innovation within the tourism industry,[30] and pivot to creating innovation hubs for SMEs. [31] It has expanded its work with Amazon Web Services to pioneer real-world public sector technology reforms around traffic, health, well-being, logistics, and the environment, including internship programmes for local students to applying cloud technology to public sector challenges.[32] Expansion of free trade zone arrangements around the Port aims to position Busan as a major player in maritime logistics and innovation.[33]

Figure 4: A restaurant in Busan displays a "Busan Clean Zone" certificate to reaffirm confidence among consumers

Source: Wikimedia [34]

3. High-value economic transition

Emerging lessons for Greater Victoria:

A high value economy for most small city regions who have achieved it has been a gradual outcome of long-term integrative goals: niche specialisation, a conducive business and enterprise climate, highly collaborative and well-incentivised knowledge institutions, and continuous infrastructure investment.

Upgrades to art and culture can be an important catalyst for transforming the profile of a region and triggering the rise of creative industries that directly and indirectly support cutting edge businesses, and drive a regional reputation as a place in which to invest, innovate and conduct business.

A high value economy spanning a variety of sectors is not only a driver of productivity in the medium term for smaller coastal regions: it is also proving essential in the longer term for them to bounce back from global economic shocks, re-calibrate their specialisms to new global demand, and ensure they do not get left behind or systematically lose residents to more dynamic locations.

International evidence from OECD, World Bank, the What Works Centre, and LSE point to a number of core approaches that can support smaller regions in the vicinity of larger hubs to grow their productivity:

1. **Increase transport connectivity with regional locations, especially larger urban economies**
2. **Enhance business climate advantages such as digital connectivity, enterprise culture, and customised skills pools.**
3. **Develop complementarity with larger urban economies (Vancouver, Seattle) via sectors, supply chains, differentiation.**
4. **Develop clustered specialisations that play to strengths and foster enterprise.**
5. **Sustained effort to understand the needs of preferred customers and meet them.**
6. **Optimise the role of Knowledge Anchors and Networks and other large institutions in the region.**
7. **Focus on competition outside the mega-region and work as a regional team (ie Cascadia) to attract talent, investment.**

Elements of these approaches are visible in Miami and Aarhus.

A common goal to diversify from 'sun and fun' — Miami, USA

Over the last 15 years, Miami's shift to a higher value economy has rested on a deliberate pivot to culture, facilitated by forward-thinking public, private and partnership investments in cultural infrastructure and events, creative spaces and arts initiatives across the city.[35]

During the 1980s, Miami experienced large-scale creative brain drain. Business leaders from the Miami region came together, motivated by the risk of losing competitiveness due to the city's relatively peripheral location, comparatively undiversified economy, and negative brand image. In the mid-1990s, Mayor Penelas appointed a prominent business leader Jay Malina to spearhead the coordinated response of the region's businesses. Under One Community One Goal, 42 public and private partners came together to jointly pursue a long-term citizen owned agenda around diversification, trade, cosmopolitanism and entrepreneurship.[36]

This commitment has left a substantial and positive legacy on Miami's economic competitiveness. It enabled the region's:

- **Diversification into 7 high value sectors**
- **Pursuit of Latin American HQs of global firms (eg. HBO, Fedex)**
- **Investment in culture and Art Basel in a new kind of visitation and philanthropy**
- **Substantially improved air connectivity**
- **Improvements in economic development agency**
- **Downtown zones transformed into contemporary mixed income districts, home to incubators and start-ups**
- **Shift from "sun and fun" reputation towards one of design, culture, trade and innovation**
- **Longer-term retention of career age talent** [37]

Since 2000, Miami has had great success establishing itself as a hub of contemporary art, fashion and architecture, encouraging creative talent to return to the city, and more importantly, providing them with a reason to stay. The role of large-scale catalytic events, prizes and incentives has been important in attracting artists to visit, showcase their work, and stay in Miami, alongside the role of the cultural infrastructure and arts spaces in providing focal points. The arrival of Art Basel in 2006 provided both an organising brand for cultural investment, and a means to recruit public and private investors to support art-based investment at different scales.[38]

Leading the Transition

Miami's cultural improvements and economic diversification have been underpinned by an entrepreneurial and visionary group of developers, as well as enhanced financial and district management tools.[39] Neighbourhood management bodies run and financed by the private and public sector have been key to Miami's creative use of public space and diversification of locations. There is also a strong culture of Regional Planning spanning the three main cities in Southern Florida, which has overseen investment in infrastructure, public space, pedestrianisation, public safety and security.

Intersection between Culture, Business and Trade in Miami Today

Culture has worked hand in hand with efforts to develop Miami's reputation for trade, business and higher education. Today, there is a strong link between Miami's cultural revival and its resurgent reputation as a city region to conduct business, innovate, and raise families. As Miami develops its role as a hub city for Latin America and the Caribbean, culture underpins its claim to host other high order functions. The Miami Customs District is one of the top 10 in the U.S., and with world-class facilities like Miami International Airport and PortMiami, Miami-Dade County has become a global centre for international trade.[40] Both imports and exports have risen in recent years, and total trade in the Miami Customs District exceeded c.CAD$160 billion in 2018. [41]

Figure 5: The 7 tenets of Miami's "One Community, One Goal" initiative

Source: Miami Beacon Council [42]

The new diversity of Miami's economy has helped the city to absorb some of the negative impacts of the COVID-19 pandemic. Like all major global cities, Miami is experiencing a downturn. But despite the cancellation of key events like Art Basel and the satellite festivals it has spawned, other areas of Miami's very diverse and inclusive business sector have been able to adapt quickly and positioned strongly in areas of digital healthcare and resilience management.

Institutions driving internationalisation — Aarhus, Denmark

Aarhus is Denmark's second city after Copenhagen and, as well as being the principal port of the country, is also the largest centre for trade, serves and industry in the central Jutland Region. It is the fastest growing city in the country, thanks to a successful economic transformation over the past decade, which has resulted in the attraction of 15,000 new residents and the creation of over 20,000 new jobs in the knowledge, service, and innovation industries.[43] Aarhus' successful transition has mainly been due to strategically targeted, publicly supported investments, long-term city government support of a pro-business, pro-education culture, and a shift from local anchor institutions to support specific cluster niches.

Long-term city support of a pro-business, pro-education culture

Over the course of 20 years, the City of Aarhus, collaborating with the business community via the Board of Business, has developed and realised multiple plans to create a city based on culture, business and education, all managed through a yearly implementation plan. The plan provides a clear framework for future business development and lays out policies characterised by an unusually high level of willingness to act on sound ideas, even if long-term solutions are not yet fully visible. The greater Aarhus area is also organised into Business Region Aarhus in order to coordinate synergies between the City of Aarhus and the surrounding 11 municipalities, in laying the foundations for future business growth.

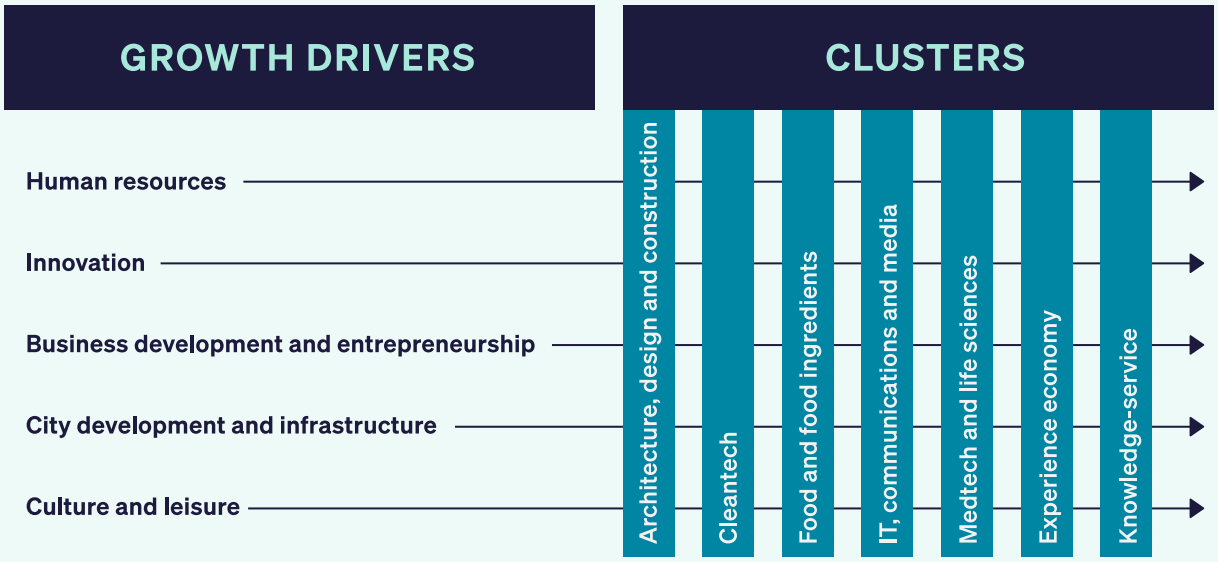

Figure 6: Cross-cutting of clusters with growth drivers in Aarhus

Source: City of Aarhus [44]

Leadership of the University towards economic diversification and high value clusters

More than 10 years of high cooperation and coordination between the city government, businesses, organisations and knowledge institutions have helped to spur the creation of sizeable economic clusters in industries with high growth potential. Financed predominantly through public private partnerships, and led in part by Aarhus University, these clusters have helped to put Aarhus on the map as an innovation city, and have also driven wider spillover productivity effects throughout the economy.

Aarhus University is a key partner in most of the economic initiatives in the City and its surroundings, and acts not only as a financial partner, but also as a funnel for talent in the different industries, and curator of the clusters themselves. Examples include:

- **INCUBA Science Park, an IT and biomedical cluster.** Partly owned by Aarhus University, and partly owned by the private sector, the Park has been successfully fostering closer relationships between public institutions and start-ups.[45]
- **Aarhus Development Park,** home to several specific industry-related parks including Navitas Park which shares with the Aarhus School of Marine and Technical Engineering and AU Engineering.[46]
- **Agro Food Park in nearby Skejby,** which facilitates cooperation between companies and public institutions working within food science and agriculture, led in part by Aarhus University.[47]
- **An "Innovation Institute",** which assists in the translation of ideas into viable business propositions and continues to partner with Aarhus University to increase throughput of entrepreneurial talent from the region.[48]

City government has geared its economic strategy strongly around clusters, with each of the 7 clusters tightly linked to current and future infrastructure. One example of this is the upcoming "axis of knowledge" light-rail infrastructure initiative, which will involve the creation of a new light-rail system to connect clusters along the city's central axis and ensure collaboration and cross-pollination.[49]

Clear internationalisation strategy and focus on attracting corporate HQs to the city centre

Aarhus' shift to a higher value economy has also meant much more purposeful attraction of international talent to the region. As well as restructuring the proposition for businesses, the city launched the Business Aarhus pilot project, a one-stop service centre for international businesses and employees. In 2009, Aarhus City council adopted a new international strategy designed to help grow and attract international talent and investment. The strategy is supported by an Internationalisation Committee with representatives from the public and private sectors and a toolbox and campaign strategy designed specifically for companies seeking international talent.[50]

Finally, successful economic transition has been accelerated by a focus on city-centre reinvestment and the attraction of large corporate HQ functions. Aarhus has worked hard to ensure that changes in priority land use for the city centre have gone hand in hand with public realm improvements and private sector investment in order to create a city centre that is more attractive for HQs of large global companies.

4. Ecosystem development

Emerging lessons for Greater Victoria:

Nurturing a handful of large innovation companies is important for smaller regions to build the scale of jobs and cutting edge experience, and to draw talent from all over the world to the region.

Recognise the strong innovation context in the Cascadia region, look to be part of it, and leverage it. Smaller places in much larger regions focus on connections, complementarities, and collaboration in order to help more of their firms survive, scale and overcome the so-called 'valley of death'.

Balance the focus on specific locations with clear attention to regionwide ecosystem development, which relies on fundamentals of business demand, liveability, talent attraction, spin-outs, spin-offs, spin-ins, corporate ventures, real estate and tenant services, and high levels of trust, openness and networking among key players.

Developing and communicating Greater Victoria's success with other innovation agendas, and building the region's innovation brand and reputation, will be an important priority.

What is the innovation economy and why does it matter?

Innovation is more than a single 'tech sector' or a 'start up scene' — it describes how whole portions of an economy embrace technologies and change. The 'innovation economy' describes how established industries experience new pressures and opportunities as a generation of technologies come to the fore. It has always been with us, but this time it's at a bigger scale and spread across more industries. There are an estimated 100 million innovation economy employees worldwide.

Cities and regions are realising that the activities and the interaction among these sectors and firms also trigger larger chains of multiplier effects for the rest of their economy. Jobs in the innovation economy more than double the demand for local professional and non-professional services compared to those in traditional economies.

The Innovation Economy is not space blind. Most industries' innovation models depend on proximity between firms and institutions, while the innovation economy talent pool benefits from larger urban markets and increasingly prefers urban environments and lifestyles.

For regions like Greater Victoria, the innovation economy matters because:

- **It can provide a source of jobs that are comparatively well-paid and better able to withstand global cost pressures, helping to enhance resilience to global economic shifts and shocks and improve productivity**
- **Interactions among the sectors and firms that constitute the innovation economy trigger larger chains of multiplier effects for a whole region, not just urban cores. Supply chains for the innovation economy are deep and diverse, and the innovation economy efficiently re-uses and restructures land uses and the built environment.**
- **Innovation economy activities are well positioned to drive exports of high value goods and services, helping to improve resilience, reach and influence internationally.**

Targeted ecosystem development — Helsinki-Espoo, Finland

The Helsinki-Espoo region consists of one larger and one smaller city, and is one of the most innovative in Europe. The two cities, which are located less than 20km apart, are home to a vibrant mix of academic institutions, local research institutes, headquarters of tech and telecoms companies, and several specifically designated innovation hubs, which serve as platforms for collaborative innovation.[51]

Helsinki-Espoo illustrates the importance of enshrining whole-region collaboration within an economic strategy with explicit targets and action points, and responsibilities for regional development organisations, educational institutions and citizens. The recent West Metro Growth Corridor infrastructure project, designed to link Espoo's Innovation Garden to Downtown Helsinki, reflects a regional shift towards a whole ecosystem approach.[52]

New models of education as innovation drivers – Aalto University

In Helsinki and Espoo, post-secondary education courses have been designed around the concept of challenge-driven education in order to drive entrepreneurial thinking and actions. Across the region, 75% of Master's programmes are now developed in collaboration with companies.[53] For example, Aalto University's Product Development Project (PDP) adopts a problem-based learning approach designed to help local companies overcome issues.[54] The Aalto Design Factory provides a physical space to host courses and is used by 1500 students each year to develop prototypes to test new innovations in support of local company goals. The university specifically prioritises facilitating businesses' access to research with high innovation potential over more traditional methods of IP-related technology transfer.

Interconnected networks and collaboration – Espoo Innovation Garden

Helsinki-Espoo shows how innovation ecosystems function best when there is a high degree of collaboration, trust and openness throughout the industry mix which can be concentrated in key locations. The Espoo Innovation Garden has emerged as a new locus for collaborative innovation activity by providing an interconnected network of smart infrastructures and a space for citizens to come together with companies and universities to improve the area's quality of life.[55] There is no formal, top-down governance model, which has led to much wider participation among local residents, R&D units, research institutions, corporate organisations and societies. The Mayor's Office serve as the primary matchmaker, advisor and facilitator, and benefits from the open platforms and processes that the Garden provides.[56]

Figure 7: Espoo West Metro Growth Corridor

Source: Helsinki-Finland, MIPIM 2019. [57]

Reorganising for innovation – how Malmö put itself on the innovation map

A prosperous industrial city until the 1970s, Malmö made great strides in the mid-1990s to update its identity and reinvent itself as a leader in the green and knowledge economy. It developed a new development strategy, catalysed by the relocation of Malmö University, and transformed former industrial areas in the western parts of the harbour to pioneers of environmentally sustainable buildings.[58] Malmö is now the 2nd largest cluster of start-ups in Sweden, after Stockholm, and the region boasts one of the most dynamic start-up ecosystems among small city regions globally.

The role of local anchors in re-inventing and cross-fertilising new industries and clusters

Malmö cultivated sizeable clusters in sectors ranging from gaming, media and IT to life sciences and pharmacology. Over the past two decades, the region hosted the growth of world-leading companies such as video game studio Massive Entertainment, whose success has in turn helped to scale up small and medium-sized companies within a strong culture of sharing between big and small teams. In the last few years, some of the largest players in the digital games industry have set up or invested in Greater Malmo: King, Supercell, Avalanche, Massive and Ubisoft, among others.[59] Massive helped to pull in many other game developers, who have found their own studios in the region or joined other emerging Malmo companies.

The reinvention of other industries in Malmo has been the product of deliberate joint ventures into new technology organized between public bodies, Research Institutes, domestic companies and local municipalities. Such a model for example led to the creation of the world's first automated textile recycling facility.[60]

An important factor for some of Malmo's clusters is that specific organisations have become the go-to one-stop-shop for public officials, politicians, overseas businesses, and leaders from other industries, co-ordinating meet-ups and knowledge-sharing sessions.

> *"Maybe it's the smaller city, or southern feel. Either way, Malmö is perhaps where Stockholm was around 10 years ago, showcasing its flexible innovation to the rest of the continent, and indeed the world."*
>
> ***Vedrana Tabor**, CEO, Boost Thyroid healthtech.*

Regional integration to facilitate knowledge transfers and boost the ecosystem

Malmö's global innovation proposition has been strengthened by better physical and brand integration with Copenhagen, the Nordics' largest labour market. The Öresund bridge and rail line that now connects the two cities, and the efforts to coordinate and pool knowledge and life science assets that ensued, has raised two-way flows and communication and in effect created a more dynamic single 4 million person market. While Copenhagen inherits from Malmö a whole set of assets, opportunities and capabilities that would not otherwise be in the region, Malmö acquires from Copenhagen access not only to the scale that enables its leading industries and edges to amass greater depth, but also to much larger housing and labour markets and to a more advanced infrastructure and connectivity platform.

Enhanced connectivity also brings with it access to a 100 million person+ mega-region market. Malmö is set to be a key node in the Scandinavian-Mediterranean project – a future transport and innovation corridor running from the South of Italy to Stockholm and Oslo. This project is reducing transport times and integrating Malmö's innovation ecosystem with the rest of Europe and effectively expanding local companies' labour and consumer catchment.

Medicon Valley Alliance: a cross-border life sciences hub to promote global visibility

In recent years, stronger partnership with its larger neighbour Copenhagen has also allowed Malmö to be **part of a whole region** proposition called Medicon Valley. This area is home to over 350 leading Biotech, Medtech and Pharma companies[61] and through the Medicon Valley Alliance (MVA), the two regions have combined their life science clusters to increase visibility and promote external links to other top-class life science hubs. As a result Malmö has managed to attract major companies to the region and to more closely play to the strengths of its existing innovation institutions, including expertise in bioengineering and biological surfaces at Malmö University.[62]

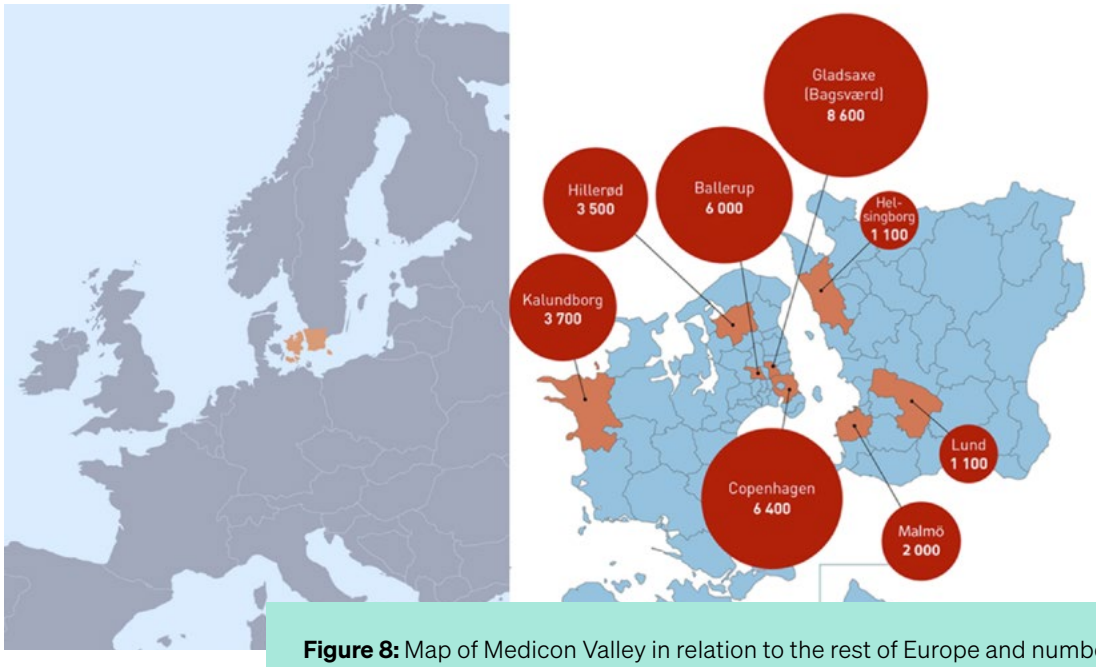

Figure 8: Map of Medicon Valley in relation to the rest of Europe and number of life science employees in selected municipalities signed up to the alliance

Source: Adapted from BioPharma Reporter and Nordic Life Science Insight [63]

5. Innovation districts

Emerging lessons for Greater Victoria:

Authentic character and identity tied to the history of the area is critical to a centrally located innovation district. Thriving districts have a 'whole place' perspective with innovation space pre-requisites matched with placemaking and rigorous community curation.

Lean and proactive district leadership, even with limited resources or capacity, can play an essential role in curating the mix and ensuring that as demand rises the project continues to align with the innovation mission.

Private sector engagement, partnership and leadership is important as innovation districts evolve. Public policy typically shifts towards facilitation and fostering connections, rather than designation or up-front investment.

Use Greater Victoria's urban infrastructure, land and water as a platform for experimentation. The variety of uses and infrastructures can be used as a basis for experimentation in new urban and ocean solutions. By inviting and permitting creative experiments, and encouraging ideas to co-locate with production, the city can observe which activities blossom and build a strategy around them.

Alongside the current Innovation District proposition, ensure there is flexibility and market choice that investors and growing firms might want, promoting multiple locations. Inspiring projects succeed when they complement other districts and are flexible to market preferences and choices. Ultimately multiple distinctive locations will emerge.

A co-operation platform that supports innovation locations — Eindhoven, Netherlands

Eindhoven, the Netherlands' 5th city, is now globally recognised as a world-leading Lighting Technology ecosystem and despite its small size has cemented its position as one of the main cornerstones of the Dutch economy. This is mainly due to the successful diversification of its economy and pivot towards innovation.[64] In the 1980s, the city lost most of its jobs, as the two main employers, Phillips and DAF had to downsize. Eindhoven had to strategically diversify by intensifying relationships between tech-driven companies, research institutes, universities and local government.[65]

The Brainport Model: all players have clear roles and responsibilities

The initial strategic model was based on creating a development company to drive "triple helix" relationships between large firms, SMEs, the university and government. Its board is made up of local government officials, presidents of knowledge institutions, and business representatives of the four main business anchors.[66] The local government acts as a facilitator, providing financing and fostering collaboration. Education and research provide the strategic focus and knowledge to develop new ideas, and businesses provide funding and cooperation.[67]

Five specialised campuses to promote cross pollination

To create economic value and facilitate business development, the city prioritised the creation of five clustered campuses, each with a specific area of expertise and closely linked to the others by communication networks that facilitate trust and collaboration. The five campuses focus on different niche sectors, each with their own anchor companies, that foster competition to promote innovation within the start-up ecosystem surrounding them.[68]

As Brainport has evolved, it has taken seriously the need to continually reinvent itself by engaging with the wider community. The Brainport Development Board uses scenario planning exercises developed with experts and representatives from the ecosystem, ensuring constant adaptation and maintaining competitiveness with international innovation hubs.

Figure 9: Map of the main campuses of Brainport Eindhoven

Source: ITS in Europe.[69]

Innovation community curation — Auckland, New Zealand

Auckland is an example of a city that has had great ambition to create an innovation district in its centre, but only limited capacity to support and finance one. As a result, the city government decided to focus first on creating the necessary conditions to catalyse the innovation ecosystem. The location, at the core of a regeneration project in the CBD and close to the main transport hub, offered many advantages to be a flagship of the region's ecosystem while boosting the urban vibrancy of the redeveloped Wynyard Quarter.

A 'whole place' perspective tries to optimise all spaces within the district

A multi-agency approach, arising from Auckland's unique and complex fragmented governance, helped to create the path for a 'whole place' perspective. The city council body responsible for purchasing, managing and selling property, Panuku Development, drove the physical regeneration of the waterfront, while a development agency, Wynyard Quarter, was also formed to deliver a place-based approach. ATEED, Auckland's economic development agency, was also involved in the regeneration, although it did not own any physical assets. This limitation encouraged them to think innovatively: in 2014, ATEED developed a prototype to test demand in the area, which then led them to work with Panuku Development on the design of 3 buildings that would provide a range of spaces to support business growth pathways by enabling firms to grow and move between sites, and access a range of services such as events spaces and training rooms. ATEED then adopted a more permanent "Campus Strategy", focused on delivering the space for co-location of early stage businesses while building on the growing vibrancy of the wider Wynyard Quarter to create a 'whole place' experience.[70]

Pre-emptive curation of the ecosystem is needed to seed innovation

Aware that tensions could arise between commercial and innovative goals in this prime real estate location, the economic development agency prioritised protecting and curating the innovation ecosystem. Although they had the option to develop 24,000 sqm, ATEED decided to develop only half of it as the precinct's aim was to create a hub for people wanting to spend time there, rather than to accommodate the maximum number of innovative firms. Moreover, the growing interest from active corporate tenants and multinationals self-identifying as part of the innovation district resulted in the boundaries of the district expanding beyond the 6 initial blocks. As a result, ATEED's focus shifted from physical development to the provision of community services such as events to activate this space and ensure that businesses moving on would stay connected to the community and help it grow. They also launched a Public Innovation Lab with the aim of spurring collaboration between the public and private sectors.[71]

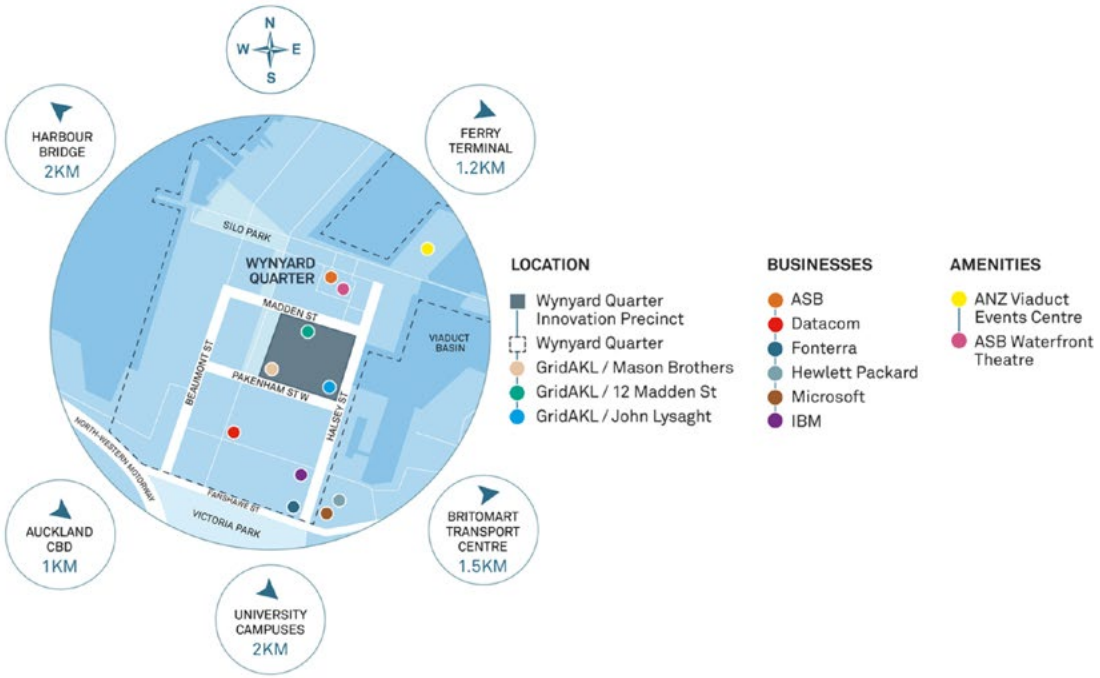

Figure 10: Map of GridAKL within Auckland's Wynyard Quarter

Source: https://gridakl.com/how-to-get-here/

Partnerships as a tool for shared commitment to an innovation district character

To overcome challenges of fragmented governance and ownership of assets, the economic development agency, together with the innovation campus, prioritised forming partnerships as a way to influence developers' tenant strategies. For the next cycle of development, ATEED and the innovation campus (GridAKL) are focusing on building more partnerships, especially with overseas markets and innovation hubs that can support a transfer of skills, benefits and market opportunities. Other key priorities include finding an anchor institution and increasing public and 3rd party investments.

6. Anchor institutions

Emerging lessons for Greater Victoria:

When operating at their maximum on behalf of a smaller city region, anchor institutions boost private investor confidence, build bridges between knowledge and entrepreneurship, and allow regions to build new economic edges, and stimulate a more rational and intelligent use of regional infrastructure. The roles they play allow a smaller region to retain its pull versus larger regions.

Anchors in small city regions are often the heart of efforts to move beyond short-term opportunities and political partisanship, and make the case for additional infrastructure at the right time. They are a source of leadership, expertise and long-term thinking on everything from the visitor economy to housing, growth management, social participation and environmental improvement.

In times of crisis, anchors play important roles in helping a region look ahead and at the same time connect with the past, re-build self-confidence, deliver on a social mission, and achieve national and international visibility.

Anchors like universities, stadia or teaching hospitals are often unique in possessing the scale to help build critical mass in key locations. But not all anchors (or parts of anchors) are equally effective at triggering a process of urban revitalisation. Decisions about which anchors to re-locate or re-invest in, and how, requires careful planning and sequencing. This includes selecting the right institutions or that benefit from proximity, networking and learning from cutting edge partners – rather than those which are more self-contained or mainly deliver services. It also means choosing locations where there is the right quality of place and access to space for future cycles of growth.

Appetite for partnership to drive local innovation — Boulder, USA

Located 40km from the booming business hub of Denver, Boulder is a proud and compact city whose thriving tech ecosystem is underpinned by decades of collaboration between Universities, Research Institutes and the local entrepreneurial community.

Partnership Between a National Research Institute and the University of Colorado

Research activity in STEM subjects at the University of Colorado Boulder has helped to develop high-tech, electronic and aerospace industries in and around Boulder County.[73] The area has also benefited from the presence of a federal research facility, which arrived in the city in the 1950s and brought with it a critical mass of researchers. The Institute was attracted to Boulder because of the presence of the University. In 2005, the two research institutions established a formal partnership to jointly strengthen their innovation in STEM and fulfil their shared missions of using their expertise to address pressing social challenges. Experts in both institutions combine their scientific, technical and engineering competencies in major research collaborations and jointly promote the region's innovation specialisms to the world.[74]

The partnership is based in Boulder but actually fosters whole region collaboration because it incorporates multiple Institute and University campuses in several cities. Shortly after both institutions entered into their formal partnership, they began to share staff, facilities and equipment across these sites and campuses. This enabled the creation of an experimental programme that invites researchers to take up joint roles at the Institute and the University.[75] This rare opportunity in Boulder is made possible by the close proximity of anchor institutions. In 15 years, it has attracted distinguished scientists and engineers from across the USA and around the world.

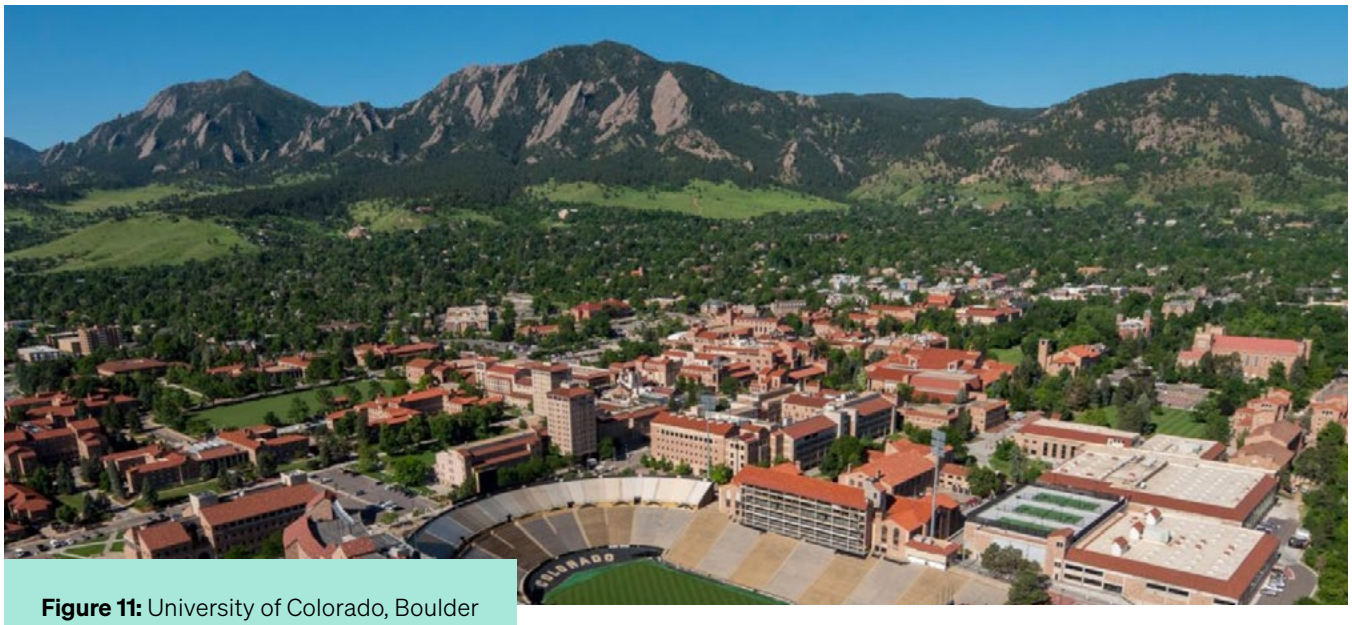

Figure 11: University of Colorado, Boulder

Source: University of Colorado Boulder.[76]

University of Colorado's Entrepreneurial Network

An important part of the National Institute and the University's joint contribution has been training future generations of scientists and engineers and building bridges between their academic research and the commercial opportunities of the thriving local start-up scene. The University in particular has very strong links with local entrepreneurs, who are regularly invited to mentor and lecture students on campus.[77] In return, the University supports the local community of entrepreneurs and start-ups by providing grant funding and opportunities for entrepreneurs to engage with academic research collaborations.[78]

Universities anchoring digital innovation downtown — Newcastle, Australia

Newcastle is Australia's 7th largest city. Located in the Hunter Region's Pacific coast, 160km north of Sydney, the city served as one of the nation's hubs for mining, steel production and trade, but is pivoting to knowledge industries in order to secure its economic future. In recent years, the University, colleges and local government have been working together to foster the business conditions for the innovation economy to grow.

Collaboration between University, Business Community and Two Tiers of Government

In the Hunter Region, the development of innovation precincts and investment in smart city infrastructure has become a shared priority. Newcastle City Council, University of Newcastle, Newcastle's business improvement association and the regional digital innovation taskforce have come together in a collaboration funded by the State Government, together with capital from a regional Infrastructure and Investment Fund, the city council and the university. The five city councils that compose Greater Newcastle and local governments in the wider Region are overcoming unsuccessful past attempts at collaboration by finding common ground in their visions for the region's future.[79]

The three core projects are:

- **A new Downtown Innovation Hub at Newcastle University:** A purpose-built centre designed to incubate and test ideas in the region and deliver those ideas to the rest of the world. In 2020, the project was fast-tracked as a priority project by State Government to help re-stimulate the region's economy as it emerges from COVID-19.[80] The innovation hub is part of the new Honeysuckle Campus, which has established the presence of University in downtown Newcastle for the first time (the university's main campus is located 12km from the city centre). The Honesysuckle campus has been enabled by the City's rezoning to allow mixed-use, open space and tourism activities.[81]

- **A Digital Precinct:** A transformational high-speed internet zone extending from the City Centre to the West End where high tech, digital and creative industries will be able to collaborate with each other and the world in real time. It is starting to evolve into a cluster of tech businesses and entrepreneurs who are attracted to the zone's guarantee of broadband with the highest levels of reliability and speed.[82]

- **Smart City Infrastructure:** Connecting public services in the Hunter region on a cloud network to improve efficiency and encourage innovators to produce locally relevant services and applications.[83]

The investments accelerated by the Partnership is already starting to raise the visibility of Newcastle University in Australia, increase talent attraction from other larger cities, and inspire the creation of many locally tailored technologies and apps.[84]

Open Local Government to drive innovation and co-creation

The project aims to use knowledge-enabling infrastructure to support new and existing entrepreneurs and tech businesses. The role of the City Council is to enable and implement the digital infrastructure that will make smart city applications and innovative business growth possible. One of the key projects under the initiative is the LoRaWAN Internet of Things platform: a low power, low cost network of sensors which bridges the gap between cellular and Wi-fi devices. This network is underpinning a range of initiatives aimed at raising Newcastle's liveability, including the integration of public transport, improved signalling to city council about when and where to collect waste, and a reduction in congestion by helping drivers to find parking spaces. Businesses and community groups are also able to use the data collected by the Council for free.[85]

Figure 12: Newcastle University's new downtown campus

Source: The University of Newcastle, Australia.[86]

7. Inclusive pro-growth economic development

Emerging lessons for Greater Victoria:

More successful city region engagement with chronically marginalised and excluded communities has recently occurred through whole-of-life interventions, leverage of public procurement power, and through highly localised on-the-ground interventions.

Strategic partnerships and coalitions for inclusive growth among local companies, organisations and institutions are important because they create profile, iteration and improvement to agendas that are necessarily experimental and need sustained appetite to discover what works.

Regionwide economic development organisations can be an important convener of ideas and programmes to provide inclusive training and pathway initiatives at scale.

Integrated place-based commitment to inclusive growth — Auckland, New Zealand

In recent years, Auckland has led New Zealand's pioneering of more inclusive growth policymaking, designed to ensure the benefits of growth extend to indigenous populations, known collectively as the Maori. In Auckland 11.5% of the population is indigenous, and in addition to the adoption of equal opportunity approaches and including Maori in legislative decision making,[87] the local government has created several toolkits to support skills and inclusion, and enshrine Maori principles into its long-term strategic planning efforts.

Empowering Maori populations in decision making processes

Auckland has taken several steps to embed Maori voices into the processes that shape long-term economic growth and decision making. In 2010, the Auckland Council created an Independent Maori Statutory Board, with specific responsibilities and powers within the Council, including voting rights to ensure inclusiveness in decision making at the highest level of local government.[88] Public plans ensure that Maori are consulted during decision making processes, that their native language and principles are used, and that the plans carve out specific opportunities for the co-design of future growth (i.e. The 2019 City Centre Masterplan, AT Economic growth).[89]

Place-based inclusive growth through collaboration and co-designing innovation

Chronic disparities between indigenous and non-indigenous populations have seen Auckland City Council partner with the community to support Maori identity and well-being.[90] The most important programme is the Southern Initiative (TSI), founded in 2012, which promotes place-based approaches to social and economic development:[91]

- **TSI adopts an integrated approach to community and economic development and promoting social innovation.** Its success is based on tracking the whole lifespan of a person, following a "Cradle to Career" approach that ranges from strengthening early childhood education and family support, to adolescent skills training, high-quality job creation, career progression, and the promotion of healthy lifestyles (home programmes, family programmes, etc.)[24]

- **An enlarged City Council has created a large customer.** With a budget of over $3 billion NZD ($2.7 billion CAD), TSI adopts social procurement approaches designed to create jobs and partners with the local government on procurement, housing, and innovation (see Figure).[92] Leveraging Auckland Council's buying power since amalgamation in 2010 has been a key part of the effort to provide more career pathways. Large City contracts now require social measures – such as to take on a set number of local newly-trained workers, incentives to employ women in trades roles, and ensuring workers have meaningful career paths.

- **A spatial and development lens to inclusive growth has been important.** The Panuku Development Auckland Organisation, the regional Public Development Authority, focus on Maori inclusion in planning for the future of the city's built environment (housing, skills development, heritage and natural environment, governance).[94]

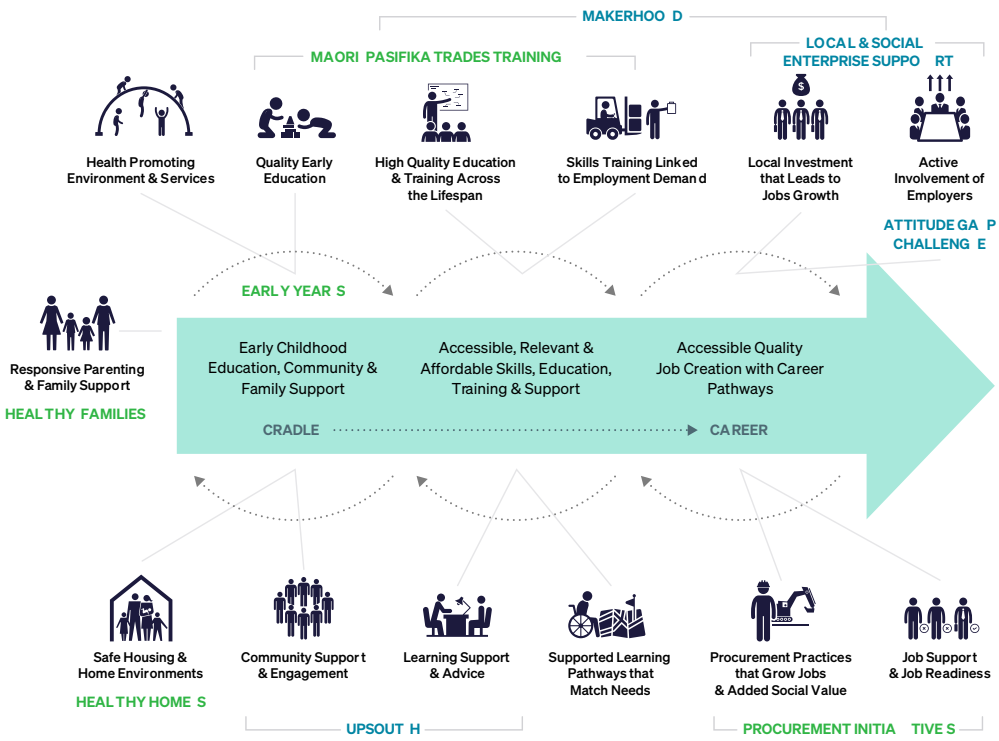

Figure 13: TSI initiatives following the 'Cradle to Career' spectrum

Source: Auckland Council [96]

So far the Southern Initiative's accomplishments have included graduates from tech career accelerator programmes, school-age makerspaces with nearly 400% social ROI, a system of mentors from top IT firms, hundreds of workshops for children and young people, and Upsouth – a digital engagement tool that rewards young people for their ideas with micropayments that has engaged more than 4,000 young people in South Auckland.[27]

Business proactively addressing disparities: Nashville, Tennessee

Known as one of America's main creative cities, especially as a result of its thriving music scene, Nashville's economic boom of the early 2000s led to a rapid increase in city centre jobs and investment. The region's economic success even saw Nashville win part of the Amazon HQ2 bid.[97] However, rapid growth also led to high housing demand within the city centre and created an affordable housing crisis, pushing lower-income residents into suburban and other communities with a history of underinvestment, leading to a rise of distressed neighborhoods in the suburbs.[98]

In recent years, Nashville has gone on a journey of learning how to encourage public and private teams to work together to create higher wage jobs for residents who have struggled to access the benefits of growth.[99] From 2017, Nashville was one of three US cities to participate in an experimental programme to expand access to opportunity for more workers and communities and encourage critical reflection on how economic development organisations can be a key institution in the journey to inclusive growth.

Nashville Chamber of Commerce: Promoting equity by including promoting inclusion and business diversity

Nashville's knowledge-based and creative economy has become one of its most important competitive advantages. But jobs within the industry have typically required high levels of educational attainment, and have been dominated by larger incumbents.[100]

The City Chamber of Commerce has stepped up to foster inclusive growth through ecosystem programmes such as:

- **Including SMEs in decision making processes and business attraction efforts,** through separating its regional governance structure into smaller Area Advisory Councils, enabling a more fine-grained geographic focus and enhanced communication between business leaders.
- **Creating a process to expose leaders of small businesses to executives of larger firms,** to widen diversity of leadership circles and consider concerns of all stakeholders, in addition to creating mentoring and training experiences for all business leaders.
- **Capacity-building initiatives,** such as those designed to improve capacity for small business owners, and targeting business recruitment and expansion efforts to disadvantaged areas to promote exchanges between residents and promote workforce development.
- **Advocating for and implementing inclusionary zoning requirements for new developments,** requiring workforce housing for large developments while promoting the use of land close to transit as a way to deliver transit-oriented development.[101]

Tech leadership and partnerships

The Nashville example also illustrates how business organisations can re-organise for inclusive growth. More recently, a coalition of private companies in the technology space, known as the Greater Nashville Technology Council (NTC), has established itself as a key player in the creation of the U.S.'s most ambitious collaborative and inclusive growth communities, spanning 50,000 tech professionals.[102] To ensure diversity, most of the education and job placement programmes provided by the NTC target demographics usually left out of the tech space (i.e. women, veterans, minorities, etc.), with free training and paid placements.[103]

8. Fostering ocean, marine, and science clusters

Emerging lessons for Greater Victoria:

Initial cluster strategies rely on committed partners focused on maximising long-term impact and seeking cross-pollination with other disciplines or ideas. People, trust, proximity and long-term skills investment are essential.

Specific cluster strategies appear more likely succeed when attached to other reforms in city and regional governments to upgrade investment promotion, business environment interface, and skills initiatives. Dedicated arms-length agencies with strong channels to political decision-making are one popular approach to ensure the efficiency, quality, and public accountability of a cluster strategy, and its alignment with wider goals.

Specific locations such as innovation district hubs can provide the essential testing capacity required for researchers and SMEs to develop scalable maritime solutions. Co-location of firms is also important in industries that have high up-front investment costs, in order so that for example marine start-ups can create prototypes and test ideas affordably.

Co-Location to accelerate marine innovation — Bergen, Norway

Bergen's economy has long been centred on shipping. The region brings together large international ship-owners with an ecosystem of legal firms, insurers, shipbrokers and technology providers and a mix of research institutions that provide advanced skills and knowledge for its maritime industries. Together, these elements form a maritime cluster known as the Hjort Centre.

Industry-education collaboration is key

Bergen's success as a maritime centre is due partly to close collaboration between research and industry. For instance, the local Shipping Association has an agreement until 2022 with the Norwegian School of Economics (NHH) in Bergen to provide research funding for a professorship and to create a critical mass of research on the future of maritime innovation. Research institutions also work closely with one another. For 12 years eight research institutes including the University and local and national centres have been committed to sharing expertise, designed to fulfil the gap for interdisciplinary work to discover cross-cutting solutions across climate science, marine technology, and the marine environment.[104]

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An innovation district to encourage knowledge exchange and improve SME mobility

In Bergen, the Marineholm Research Park, in consultation with national organisations such as the Ministry of Fisheries and the University of Bergen, has been developing a new innovation district to facilitate contact between research environments and marine industries. The Marineholmen urban redevelopment project aims to double the district's floor area for use by research and industry by building new, energy-efficient buildings which are specifically tailored for marine research and innovation.[106] The Research Park currently promotes innovation, entrepreneurship and knowledge exchange across professional specialisms supporting approximately 1,000 full-time jobs in the marine research cluster and a shared infrastructure that allows start-ups to create prototypes and test research without the need to host their own research facilities.

Co-location to improve efficiency and share investment costs

In order that key research institutions and governmental departments maintain access to the natural resources they need, Bergen is prioritising a co-location approach. National government departments such as the Institute of Marine Research and the Directorate of Fisheries are re-locating with the aquarium to a single site.[107] Both of the government departments are heavily reliant on vessels for their research, for instance to collect samples, and thus need deep-water quay access. Relocation provides more efficient access to the essential resources that they both need for their work as well as the necessary space to develop future research facilities. Co-location is reducing the expensive infrastructure costs since the facilities built are used and financed by multiple different departments, institutes or SMEs – such as wet and dry laboratories, water supply for fish experiments and water recirculation facilities.[108]

An important connector in Bergen is HATCH, a capable accelerator that has been assembling a cadre of entrepreneurs building scalable startups in aquaculture nutrition, health, aqua tech, genetics and biotech. Quality services, access to an industry-specific investor network, and strong funding capability, are all advantages as Bergen looks to grow its proposition as one of the world's most advanced marine clusters.

Figure 14: Marineholmen, Bergen

Source: University of Bergen [109]

Institutional adaptation to build clusters — Hamburg, Germany

Hamburg's economic development has for many years been centred around its international maritime connections. The city's market share for container traffic among north-western European ports doubled between 1980 and 2005, resulting in many spin-off innovations in the transport equipment, aerospace and petrochemical sectors.[110] In response to the impacts of global economic recessions, Hamburg's main approach has been to harness its status as a fairly autonomous 'city state' within Germany's federal system to develop its clusters and increase support for SMEs.[111] In contrast to other cities, Hamburg's cluster agencies have direct access to city government ministries, the ability to provide customised support, and the means to address skills gaps.

Cluster integration and tighter co-ordination

Recognising the opportunity to position itself as a green, business-friendly metropolis, re-embrace its waterfront and update its port functions, in 2007 Hamburg formulated a new spatial vision.[112] The strategy involved two main tasks: expanding port facilities to accommodate larger Chinese ships and avoid market share loss to nearby ports such as Antwerp and Rotterdam; and increasing the growth of the SME-based and green economies. 'Vision Hamburg' integrated public marketing, tourism and business development bodies under one umbrella and consolidated the city's two main clusters: maritime and aviation.[113]

Promoting clusters through incentives and collaboration

The Hamburg Innovation Trust launched incentives such as the Programme to Promote Innovation (PROFI) to support practical R&D projects in the mechanical engineering, maritime and logistics sectors.[114] The bundling of multiple policy areas within individual ministries helped to re-affirm the role of cluster agencies.[115]

Figure 15: Schematic representation of Hamburg's clusters

Source: Hamburg Logistics Initiative.[116]

In Hamburg, cluster agencies are managed by experienced networking professionals and founded by companies, universities and government offices. Crucially, they also have the strategic capability to address skills issues and help to provide each cluster with direct access to the relevant state ministry. This has in turn made the political process more responsive and helped to achieve a high level of customisation and iteration in order to fulfil cluster needs.[117]

To prepare a new generation for jobs in logistics, maritime and renewable energy, the city has also prioritised collaboration between business sectors and secondary schools, introducing school-age courses on shipping and cruise liners, and cluster delegation trips to China, Korea and Japan, in order to bring more to send a delegation to Asia-Pacific markets that culminate in supply chain solution companies based there declaring a willingness to use Hamburg as their European hub.[118]

Activating urban land for more intentional clustering — Antwerp's Maritime Campus

In the past one of Europe's largest petroleum clusters, the Blue Gate Antwerp site three kilometres from the city centre has in recent years seen many companies move downstream to larger plots in the Port of Antwerp. The City of Antwerp, owner of the land, decided to use the 113-ha site to fulfil its aspiration to provide a home for future industries and demonstrate commitment to the SDGs.[119] As part of a PPP, city government adopted the role of project manager with support from city and regional investment agencies, the regional waterway management authority and a consortium of two private specialists, DEME and Bopro, who led remediation, construction and real estate.

A flagship environment with clear ambitions and synergies between companies

The city government divided the site into 3 zones in order to define from the outset which business activities would be allowed in each area and set aside space for SMEs as well as larger firms that chose not to move to the Port of Antwerp. An emphasis was put on creating synergies between businesses and achieving sustainable development, for example to ensure that residual flows and waste from one firm can become resources for another firm, and on retaining any remaining, pre-existing petroleum firms. Using EU and Flemish funding, the city also established the Blue Chem incubator and accelerator for companies in sustainable chemistry, in partnership with the Port of Antwerp as well as major industry players such as BNP Paribas Fortis, Deloitte and the law firm Laga to provide a comprehensive range of support services to start-ups and scale-ups.[120]

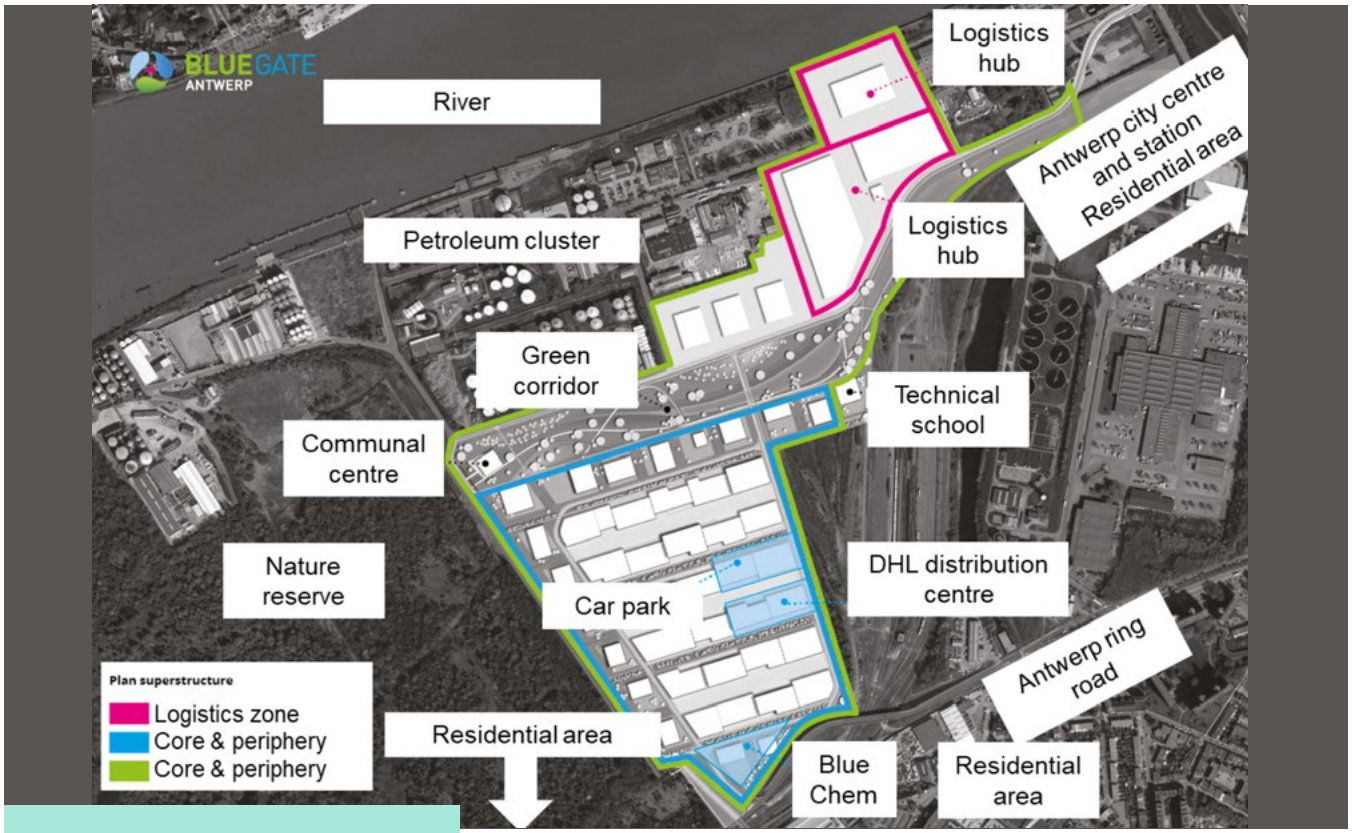

Figure 16: Map of Blue Gate Antwerp

Source: Adapted from Blue Gate Antwerp[121]

Phased development to spread costs and optimise delivery of amenities

Blue Gate is being developed in a sequence of phases to spread the cost of land remediation (€80 million per phase) and sequence the selling and development of land parcels. The clean up of the first section of land — the R&D zone — using an on-site purpose-built facility enabled partners to sell the first parcels of land to developers on the condition that they also build mixed use commercial space. Alongside remediation and development, placemaking and employee experience have become important priorities for Phase 2. The needs of the new workforce are informing the decisions about which amenities to include in a new centre on site (e.g. laundry, childcare, fitness), while a place management organisation will maintain the site's open spaces, branding and event programming.[122]

Choosing the right partners for a maritime campus of the future

The city government sold a 5-ha site within Blue Gate to a local shipowner group, to form a 30,000 sqm maritime campus designed to bring together maritime players, government, education and R&D in one location to find solutions to maritime challenges.[123] The shipowner group undertook extensive screening to select partners that would share its vision and bring the right skills and means to the table. An innovative approach was to involve an interdisciplinary building team, made up of urban planners, architects and engineers, very early in the process to co-create the vision of the site and make the most of its water-bound character.[124]

9. Collaborate to compete — the Pacific NorthWest opportunity

Emerging lessons for Greater Victoria:

In a global economy that continues to urbanise even after COVID-19, there is a strong rationale for Greater Victoria to expand its collaboration and joint positioning in the Cascadia region, even while investing in its own strong identity. All three cities would benefit from greater mutual understanding of the networks of companies and the flows within and between them. This would inform the kind of economic and R&D projects leaders in the two cities could undertake and the segments in which the whole region could be promoted globally.

Cities that have learnt to 'collaborate in order to compete', have found that:

- Starting small and building off pre-existing areas of soft collaboration, for example around business, education, or culture, can provide an initial impetus for more effective and ambitious regional collaboration and positioning. Any first initiatives need visible impacts for firms and citizens.

- Stronger information flow and data sharing within the wider Cascadia region is important to help identify the real complementarities and build a story about the cities' combined scale and common factors.

- Collaboration across a mega-region relies on universities, businesses with a large footprint, investors, and civic organisations with an enduring footprint, more than it does on high profile city leaders.

- Later in the collaboration journey, there may be an opportunity to explore what barriers prevent deeper integration, and opportunities for regulatory or business climate harmonisation, or catalytic infrastructure and digital platforms.

The 'innovation district' of a larger region — Malmö and Greater Copenhagen

City leaders in Malmö, Sweden's third city, have long observed the potential scale of opportunities deriving from deeper integration with the nearby Copenhagen region. In the 1990s, the beginning of the construction of the Øresund bridge to connect the two cities helped to kickstart an important programme of bi-regional collaboration that has ultimately helped to build a larger functional region and had significant benefits for both sides of the strait. Since then, both cities have focused on building complementary capabilities and niches, and enhancing agglomeration, often in the absence of national policy support.[125]

Anticipating the new level of connectivity, the city of Malmö used its significant fiscal autonomy and control of public land and housing stock to initiate a process of regeneration geared around sustainability and the knowledge economy. When the Øresund bridge was due to arrive in 1999, the both sides had jointly launched the Øresund project, to effectively grow the size and integration of the labour and housing market.

Creation of a new regional vehicle to act as a convener

On the Malmö side, the main impetus for participation came from the creation of a new regional entity, established as an experiment to take on economic development responsibilities from central government. The main governance vehicle is the Øresund Committee, which consists of regional and local authorities and plays an influential role in convening governments, collecting data and lobbying national authorities to reduce barriers to integration. The Committee is financed by members according to their population size, and supported by other organisations that provide data and advocacy support. The Øresund Business Council and former Øresund University (see below) have also helped to influence the initiative.[126]

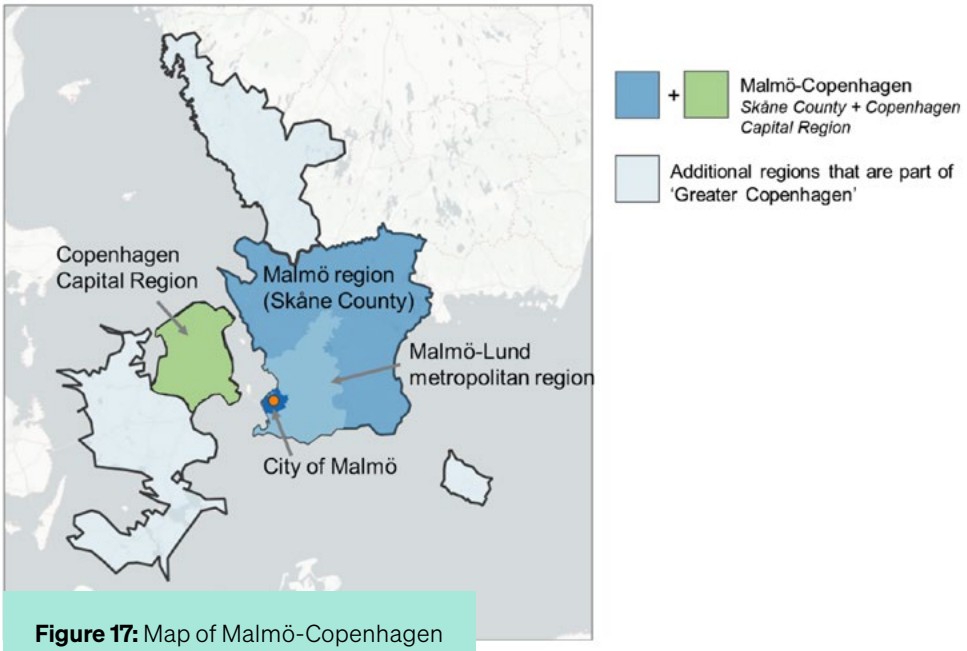

Figure 17: Map of Malmö-Copenhagen

Source: The Business of Cities

Innovation as a driver of regional integration

Developing complementarities in the knowledge economy has been a key driver of joint work. The Committee adopted a Regional Development Strategy early on in the process, around knowledge and innovation, and regional strategies have sought to align economic development strategies around life sciences, food, IT, design and cleantech. The most advanced programme to date has been the Medicon Valley Alliance, which combines the two regions' life science clusters to increase visibility and promote links with global life science centres.[127] Another key initiative was the Øresund University, a consortium of 14 universities which provide specialised services, supported firms to spin out, and helped to devise and develop cross-border projects, including cluster platforms and policies to develop them and share information.[128]

The importance of brand

As the initiative has developed, branding and outreach has also become a key activity in particular market niches. Soon after the formation of the Committee, the participating authorities agreed to develop a branding exercise to encourage citizens to affiliate with the larger two-city region, and project the region into the global market.[129]

Together, the benefits of better physical connectivity, and the advantages fostered by collaboration, have led to a number of wider positive effects. These include increased market size and borrowed scale, productivity gains on both sides, enhanced access to high value jobs, greater specialisation, and increased scope for land re-use and intensification around key nodes. As a result, Malmö has also been able to position itself as having the best of both worlds: the scale, connectivity and business advantages of its links to Copenhagen (e.g. access to talent, shared labour market and industry edges), but also the advantages associated with compactness, efficiency and proximity that characterise smaller city regions.[130]

The journey to complementary specialisation — Eindhoven, Utrecht and the 'Holland Metropole'

Eindhoven and Utrecht are examples of smaller city regions that have entered into productive tactical relationships with the larger cities surrounding them for mutual benefit. Through their participation in the Holland Metropole – an alliance between the five major Dutch cities (Amsterdam, Rotterdam, The Hague, Utrecht and Eindhoven), regional partners and major private real estate companies – these two cities have recognised the requirement to build a common regional proposition in order to more successfully compete in certain global markets. The Holland Metropole initiative is a story of cities working together to recognise the common factors for investment, discover and strengthen shared complementarities, and position themselves for investment as a single integrated region.

Common assets and complementary specialisations

Initially enabled by investment in rail and road infrastructure improvements that fostered improved connectivity between the five cities, the Holland Metropole and its constituent cities have since been on a journey to discover their common assets and complementary specialisations.[131] Through joint international missions, research, and positioning for investment as one single 8-million-person region (through for example joint presence at major gatherings such as MIPIM and Expo Real), the five cities have learned both what it is that they have that the others do not, and what is common between them. The initiative has highlighted the importance of Schiphol airport, the port of Rotterdam, and universities with footprints across the whole region – for example in Leiden and Delft – not only as anchors, but also as allies in the regional projection and identity building effort.

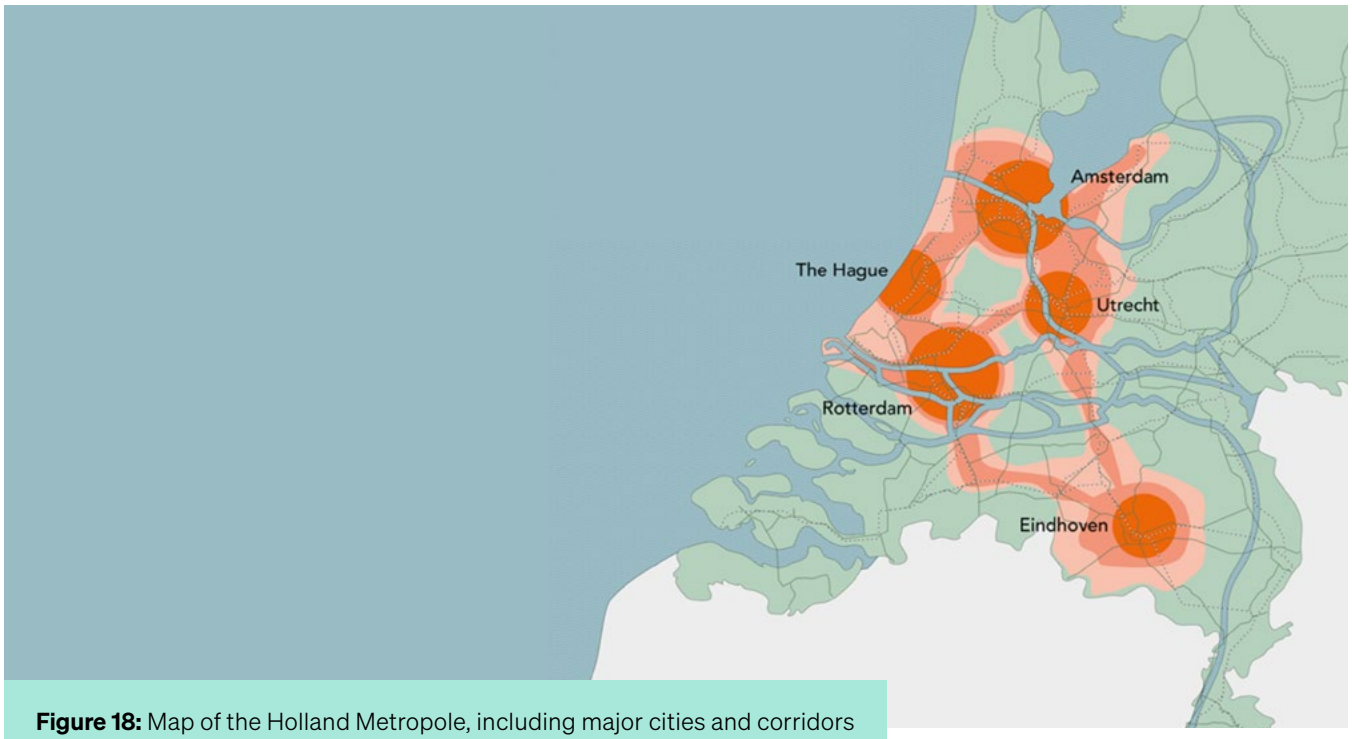

Figure 18: Map of the Holland Metropole, including major cities and corridors

Source: Holland Metropole[131]

The journey of discovery that Holland Metropole's smaller cities have been on has also enabled them to more firmly enter the radar of global audiences. The focus on regional positioning means that cities such as Eindhoven and Utrecht are now seen not only as a top choice for cross-border real estate investment, but also as potential locations for corporate HQ functions and innovation platforms.

The focus on 5-year work programmes and concentration on relatively low-key international events and showpieces has helped to create the space for a longer term, strategic perspective and to develop a coherent voice as one region. The Holland Metropole has, as a result, been able to successfully articulate the unique selling points of each region, and how each city's functions complement the others. For example, it has highlighted:

- **Amsterdam's status as the region's gateway city and gravitational centre for finance, creative industries and IT;**
- **Utrecht's young and very highly education population, which has helped to establish it as a top city for life sciences, healthy living and gaming;**
- **Rotterdam's close relationship to the port and its pioneering strengths in advanced manufacturing and clean-tech;**
- **The Hague's status as the country's political capital, its critical mass of international organisations and cybersecurity strengths; and**
- **Eindhoven's highly mature ecosystem of advanced IT and material science** [131]

The role of private partners

The Holland Metropole initiative demonstrates that effective and productive regional collaboration initiatives can be mounted by large companies, city marketing and promotion leaders, gradually drawing in the local governments in the region once the logic has been proven. HM has an unusually broad base of private partners, including pension funds and institutional investors, architects and start-ups, and a wider network of pro-growth advocates coalitions from across the region.[134] All members share in the vision of building the data and communications to make the region more visible and well analysed, and to designing shared branding collateral to help develop a single coherent identity for the region that does not erode the very strong city brands.

Regional advocacy for infrastructure and housing

In recent years, the Holland Metropole has also started to think more carefully about how to build a more integrated regional labour and housing market. Constituent cities are accelerating plans for shared commitments to housing delivery, jointly agreeing priorities for the next cycle of regional infrastructure investment, and working together to build comprehensive corridor strategies that allow the smaller cities to absorb spillovers from Amsterdam as the latter begins to reach its effective capacity. Ambitions to build an all-encompassing 'Randstad loop' railway line, avoiding some of the delays that occur due to intensive use of existing lines at the centre of the region, are also high up on the current agenda. Future projects such as these will allow the five cities to continue to 'borrow scale' from one another, while also retaining their individual compactness and character.[135]

10. Organisations for delivering economic development

Emerging lessons for Greater Victoria:

Several successful models of regional economic development strategy delivery have emerged in the last 20 years in city regions around the world pursuing diversification and global reach.

Consistency, flexibility and funding resilience are important criteria of successful peer organisations internationally. They build their profile, establish a shared language and rationale for their activities, diversify their funding sources over time, and become the natural locus for regionwide agendas such as brand and identity development.

International practice indicates that the most impactful organisations over the long-term:

- **Jointly prioritise investment, productivity, co-ordination, promotion and sustainability**
- **Attract and partner with the most capable business and investor-facing organisations**
- **Are equally adept at building horizontal alliances across local governments with vertical relationships to higher tiers of government, as well as B2B and other non-governmental relationships.**
- **Achieve buy in from citizens, maintain popular visibility, and viewed as an independent voice on behalf of the region rather than for business per se.**
- **Prioritise incremental and continuous reforms and adopt an opportunity mindset**
- **Prepare to deliver on two fronts: winning growth, and managing the externalities of growth**

This section summarises the experiences of four successful models of metropolitan economic organisation globally:

1. **Miami Beacon Council**
2. **Amsterdam Economic Board**
3. **Stockholm Business Region**
4. **San Diego Regional Economic Development Corporation**

Over time each has evolved to develop a broader base of tools and responsibilities as an implementing partner of a long-term economic development strategy.

City	Diversification	Trade promotion	Gateway functions	Inbound investment and HQs	Innovation economy	Regional data and benchmarking	Global identity	Arts & culture journey	Public-private trust and network building
Miami Beacon Council	**	**	**	**	*	**		*	**
Amsterdam Economic Board	*	*	**	*	**		*	*	*
Stockholm Business Region	*	*	*	*	**		**		*
San Diego REDC	**	*	*	*	*	*	**	*	*

Source: Business of Cities research

Table 1: Relative focuses of the four different metropolitan economic organisations

Miami-Beacon Council

The Miami Beacon Council is a non-profit public-private partnership separate from city and metropolitan government whose mission is to improve the quality of job opportunities and foster high value economic growth across the Miami-Dade region. The Council has over 80 board members, including a mix of civic leaders and business executives, and over 20 members of an executive committee with delegated decision-making powers. It is also organised into 10 industry and market committees, including in Aviation, Banking and Finance, Creative Design, and Technology.[136]

Miami Beacon Council stands out for its consistent focus on economic diversification, data-led industry analysis, site selection support, and public-private network building. It has become the effective champion of the 'One Community, One Goal' initiative, first launched in 1996 by the Chamber of Commerce (see above). As an EDO it has had particular success building strong positive relationships with larger companies in the region, to tap into business insight, build shared agendas and leverage corporate funds for regional goals such as industry-specific re-skilling.[137]

Amsterdam Economic Board

The Amsterdam Economic Board has evolved over the past decade as a small network of leaders composed of local and regional governments, knowledge institutions and businesses whose mission is to develop the Amsterdam region's innovation and connectivity credentials and promote sustainable economic growth across the metropolitan area.

The Board features 40 members, including 20 executive board members responsible for achieving a set of concrete deliverables in line with its strategy.[138] Two-thirds of the funding is provided by local governments in the Amsterdam region. The Board has earmarked 8 priority sectors in different parts of the region, and undertakes projects designed to strengthen triple helix collaboration between businesses, universities and governments in support of innovation.[139]

In recent years, one of the Board's key goals has been to ensure a better match between education and the job market in the Amsterdam region, to ensure an inclusive labour market and skills ready for the jobs of the future. Other recent initiatives have included building a regional cultural narrative, by framing cultural sites in wider region as fitting within Amsterdam's heritage; accelerating adoption of the circular economy, by closing regional loops of materials and energy; and promoting knowledge exchange between the region's innovation districts, campuses and hubs via the Campus Amsterdam project.

Stockholm Business Region

15 years ago, Stockholm was a metropolitan region without a shared perspective on its future. Local governments of different political persuasions pursued their own economic visions, with weak co-ordination, and political leaders did not engage effectively with private sector leadership.

Strong regionwide population growth triggered the central city to begin in 2007 a process of setting up the Stockholm Business Region as a unified platform for local governments to build a shared approach to branding, economic development and investment promotion.[140] Today, as a wholly owned subsidiary of the City of Stockholm, Stockholm Business Region has become the major driver for municipal co-operation, representing 55 local governments spread across 8 provinces. This is partly because it possesses cross-party leadership: all political parties are represented on its Board, and over time there has been more or less broad consensus on the decisions made.[141]

Stockholm Business Region features over 60 members led by executive managers and 18 executive board members. It has developed a joint framework for local governments to increase FDI in target industries, helps to grow the capacity of local entrepreneurs by linking them to innovation centres, business advisors and local government representatives, and created subsidiary organisations to promote the region as a travel and business destination. Among its most significant achievements is its 10-12 year regional brand — Capital of Scandinavia — to provide a common identity and attract international business.

San Diego Regional Economic Development Corporation

The San Diego REDC has been providing long-term economic leadership for the San Diego region. It is made up of 90 board members comprising public agencies (e.g. San Diego Tourism Authority, City Governments, Regional Chamber of Commerce), Civic organisations (e.g. universities), and private companies (e.g. urban services, insurance, law), and 25 team members led by a President and CEO.

The Corporation has a US$4 million budget and receives investment from over 160 private companies and public agencies at the city and regional level. 20% of its income is generated through services it delivers. Its flagship contributions to the multi-cycle growth agenda in San Diego include:

- **Brand alliance and metropolitan identity.** The REDC has forged a long-term brand alliance involving top firms, large infrastructure providers and others. This alliance has developed and championed the campaign San Diego: Life. Changing. in order to help convey to talent the region's innovation edge as well as its sunshine and lifestyle advantage.[142]
- **Organising for global trade and investment**, through an affiliate trade association, the Corporation organises trade missions to key markets and grants funds to SMEs that explore export opportunities through Metro Connect.[143]
- **Economic research and advocacy.** The REDC develops high quality industry reports and economic impact studies on specific companies and major industries in the region (e.g. genomics, technology, cybersecurity). It also works with public and private military organisations to advocate for the defence industry at federal, state and local level.

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The Business Of Cities

The Business of Cities is an urban intelligence firm that works with cities and companies worldwide. It uses advanced benchmarking and comparative analysis to help leaders to respond purposefully to the twin dynamics of urbanisation and globalisation. Over the last 10 years it has supported public and private leadership in cities and regions such as Amsterdam, Auckland, Glasgow, Helsinki, London, Oslo, Philadelphia, San Diego, Sydney and Tel Aviv, and collaborated closely with international organisations such as the OECD, World Bank and Brookings Institution.

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The Business Of Cities

Report 3
May 2021

Greater Victoria's Global Fluency

The Path to Sustainable Prosperity

SOUTH ISLAND PROSPERITY PARTNERSHIP

CITY OF VICTORIA

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Executive summary

COVID-19 is a shock to the system of cities and regions. Its effects demand a new phase of international orientation for those seeking a long-term success model.

New economic realities are hitting — rapid digitisation and automation, ageing societies, insufficiently diversified economies, trade conflicts, and competition from emerging markets. They demand fresh approaches to talent, technology, development, resilience and value creation.

Adopting and executing new approaches come naturally to regions that have global fluency.[1] A globally 'fluent' region, an idea pioneered by the Brookings Institution, is one that can not only 'read' the global market, but also listen and speak confidently. It is one that understands how to use the assets and relationships it has already gained and combine those with deliberate efforts to change path and fill new competitive niches. By contrast, regions that are unprepared or unwilling to adjust become stuck in narrow formulas for success, and ultimately are unable to deliver prosperity over multiple business cycles

In recent cycles, Greater Victoria has largely had an insular orientation. And yet the region today plays at least four inter-locking roles that fuel many global relationships:.

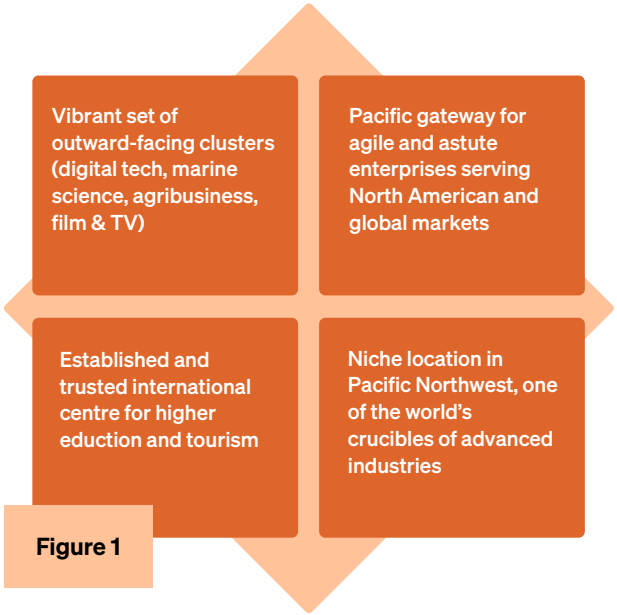


Figure 1

- A vibrant set of outward-facing clusters in digital technologies, marine science, agribusiness, film and TV.
- A Pacific gateway for agile and astute enterprises serving North American and global markets.
- An established and trusted international centre for higher education and tourism.
- A niche location in the Pacific Northwest mega-region, one of the world's crucibles of advanced industries.

Changes in the global economy, accelerated by COVID-19, mean that the region cannot expect to rely on its serene quality of life, entrepreneurial endowment and island identity to stay competitive. It will need to use its international assets much more intentionally for a new cycle.

Becoming more globally fluent is not some distant dream or impractical ideal. It is essential to deliver prosperity and life chances to the next generations of Victorians. The alternative is a medium-productivity, low-amenity, low-affordability future – and a future where Greater Victoria's cherished strengths will be progressively eroded and undermined.

Greater Victoria's traits

More than a century of international experience has observed that globally fluent regions have a combination of 10 main traits.

A small, highly liveable region like Greater Victoria usually heads on to a path to global fluency by acquiring one or two of the traits in sufficient depth such that it becomes aware of global opportunities and energetically starts to prepare and pivot to future drivers of demand.

Currently, however, Greater Victoria exhibits only a small number of the traits of global fluency and these need to be developed further.

One of Victoria's most visible traits is its forward-looking leadership with a world view (Trait 1). The City is promoting a concerted strategic agenda for the region's future economy, aligning with global issues and being generous to the world. There are also promising signs that previously dormant civic and business leadership is combining, via the Rising Economy Taskforce, to agree on the central strategic issues, and develop a collaborative, whole-region approach that provides a depth and durability of vision, skills, and delivery capability.

The region's comfortable quality of life and spectacular natural assets give it a sense of opportunity and appeal to newcomers (Trait 6). It also has elements of a culture of knowledge and innovation (Trait 4), embedded in its entrepreneurship base and its knowledge and defence institutions.

On the other hand, there are traits which are either not widely visible or are so absent as to present significant barriers to Greater Victoria's competitive success:

Greater Victoria's limited international profile (Trait 10) inhibits its potential to grow its innovation economy. Its tourism and sedate quality of life assets are more visible than its business or entrepreneurship qualities. The region's legacy of trading internationally has not yet translated into an instinct to think and engage globally (Trait 2). And Greater Victoria does not benefit from an enabling government framework (Trait 9) whereby higher levels of government consistently support the region to be physically and commercially connected to the global economy, or provide the incentives or reforms to deliver 'whole region' solutions and approaches.

And there are other traits that will need to be sharpened as the region embarks on global opportunity.

Greater Victoria has some promising specialisations with potential to gain genuine global reach (Trait 3), but these require effective eco-system organisation, infrastructure and visibility. Its connectivity platform (Trait 7) could link local companies to international markets even more successfully than it does. It has only had occasional success in securing investment for larger strategic priorities (Trait 8), and as the region grows more mechanisms will be needed to fund and co-ordinate investment.

Many of Greater Victoria's biggest advantages are more the product of happy accident than of intentional cycles of investment, leadership and innovation. Much of the capacity created by its advantages has been used up, and there is a need to galvanise its business know how and knowledge institutions in light of global competition (Trait 5) and seize the opportunities inadvertently presented to it by COVID-19.

Towards a globally fluent Greater Victoria

Taking global fluency seriously for Greater Victoria will mean sequencing immediate priorities and becoming prepared for the future dilemmas and challenges of regional growth in the next business cycles.

A pathway to global fluency is visible for Greater Victoria, over multiple phases.

International experience suggests that in **the 1st phase** it will be important to gain momentum, build confidence in the new agenda with the civic and business communities, and demonstrate impacts that have both a business benefit and a public good. Public leadership within the City is essential to shift to being proactive and intentional towards global markets for the first time, to developing a more integrated brand proposition that links business to tourism, and to building networks of organisations and exploring how they might work better together. This phase is often given momentum by a catalytic quarter or district connected to a CBD or waterfront location, as can be the case with the Arts and Innovation District.

In the 2nd phase, regions on a path to global fluency start to demonstrate the region-wide benefits of a global approach. More of the region recognises the connections between innovation, enterprise, good jobs, creativity, culture, cohesion and place-making. Strategic plans start to be adopted by more of the region, and initial efforts toward fostering a second hub location for innovation may be attempted. Public leadership still plays key roles in financing and strategising for global engagement, but wider leadership groups have been fostered outside Government, and multi-agency coordination across local governments has grown. Educational and cultural institutions start to become fully engaged, and collaboration on innovation agendas with the private sector has scaled up.

In the 3rd phase, regions embed a globally fluent approach across a wider range of social, environmental, and economic policies. There is greater buy-in to larger reform agendas, and confidence to advocate with one voice to higher tiers of government. In this phase, a region has begun to tell its unique story with great confidence and a differentiating voice. It makes a shift from simply attracting and accommodating business and investment, to being widely recognised for its innovative production. Diversification, both of the industry offer and the locations, is established.

Regions in this phase are usually growing their population base and redefining their spatial strategies, with new locations reinforcing the identity. In this phase networked and dispersed leadership has begun to achieve a level of coordination, trust, and confidence with each other. Public leadership shifts more towards convening other province or national leaders, and greater emphasis on fostering a climate for innovation and experiments. The region's identity is no longer mainly a consumable asset for tourists, but more a carrier of metropolitan DNA, a driver of design and placemaking, and a source of belonging and cohesion.

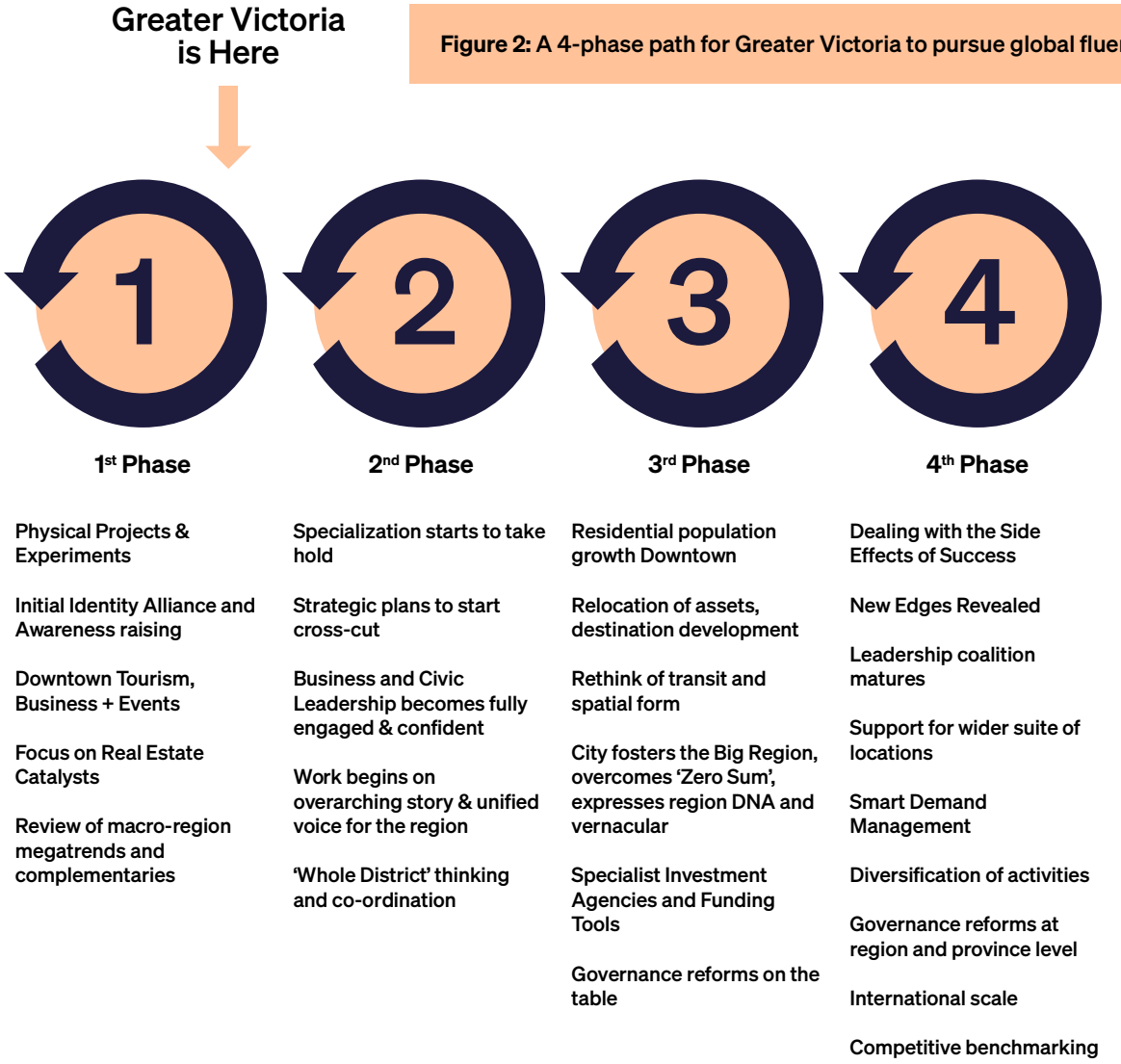
Some regions eventually reach a **4th phase**, when all their development strategies, and wider liveability goals are infused with a shared aspiration for competitive success and resilience.

Leadership is shared and flexible but united by high trust, and there is a common venture to innovate and experiment across many parts of government and civic life. Private and philanthropic investment is optimised and previously novel financial mechanisms have become normalised to guide growth and demand effectively. Regions that have reached this phase will usually have a variety of specialised economic locations, with others evolving all of the time.

Public leadership continues to play the role of convenor and co-creator of strategy and joint venture funder, but it has learned how to optimise the role of civic leadership from across its institutional and social base in the region's promotion and development. Government frequently then combines these co-leadership roles with new initiatives to tackle 'wicked issues' and the 'unintended consequences' of growth in the region. These might include acute affordability challenges, inclusion of the most marginalised people in society, longer term financing of new catalytic projects, or winning the most competitive global contests.

Government brings to these deeper challenges the skills of convening, soft power, and coalition building. It recognises that public finances and public policies alone are not enough.

Figure 2: A 4-phase path for Greater Victoria to pursue global fluency



The time to begin

The 12 months after the peak of COVID-19 represent a window when the new order of city regions will be shaken up. Benefits will accrue if Greater Victoria can be decisive and relentless in pursuing new opportunities.

As the international evidence **Report 1** and **Report 2** shows, Greater Victoria can take confidence from the fact that by global standards it has a clear liveability and enterprise advantage, and industry specialisations that have the potential to flourish in a compact regional setting. But it will need to start now to proactively address key gaps around talent retention, urban fabric, affordability, and producing scalable innovation outcomes.

In the 1st phase three imperatives stand out for Greater Victoria:

1. **A resilient, innovation-led economy Downtown**. This means first and foremost a relentless focus on the Catalytic project of the Arts and Innovation District and Ocean Futures Cluster, to signal the commitment to a diversified, innovation-led and green economy. This will be key alongside the arrival of visible regional business headquarters and knowledge anchors, such as the Telus Ocean project. It may also make sense to set a target for a larger residential population in Downtown, and to develop a 'whole of place' approach to Downtown that fosters the experience economy and continually invests in tactical urbanism to animate Downtown's capacity to surprise and inspire. Greater Victoria can also explore mechanisms for permanent improvement and re-investment between the public and private sectors and amongst multiple land owners.

2. **An outward-facing innovation and business brand.** Greater Victoria does not fully reach out to the world despite its edges and proficiency. Its technological, cultural and innovation assets are under-recognised. Greater Victoria needs to create a new positive story about the region and its future that aligns with global economic and social megatrends. A new narrative will help restore private sector confidence, build a broader and more inclusive culture of leadership in civil society, and focus attention on strategic initiatives that can gain political backing in the short term.

   This logically begins with the region starting an Identity Building process, which enlists all parts of the leadership ecosystem to develop a story of Greater Victoria's DNA that draws on internal pride to build confidence for the future. Greater Victoria can define a narrative that allows different sectors to adopt common stories across markets.

   Once this narrative has been refined, this may be distilled and communicated through a cross-sector promotion alliance that shares costs and benefits. This alliance can seek catalysts for brand exposure, in the form of events, media exposure, film, TV and third-party endorsement from diaspora, alumni and awards. And it also involves mobilising new and established Victorians to habitually spread information about the region worldwide through their family and business networks.

3. **A clear and complementary role in the Cascadia region.** The Pacific Northwest region brings with it the scale, clout, visibility and diversity to be a major global player in the upcoming cycles where the primary sources of growth will be beyond North America and Europe. Becoming globally fluent means understanding how Greater Victoria can smartly serve, specialise and borrow from this hugely exciting mega-region. Greater Victoria should be working to identify complementarities and initial forms of soft collaboration, and seeing what kinds of connectivity (personal, physical, digital) will be necessary to become more integrated with the region. The creation of shared capability and joint projects involving institutions across the region (e.g., the universities, the airports, large firms) may offer one way forward.

These three priorities can be a lead focus in the next period. Later on, once momentum has been clearly established in these three areas and Greater Victoria has become truly globally oriented, the region can usefully focus on what will be needed in the next phases, including potentially:

1. SIPP's evolution into a permanent independent leadership platform to consistently support the whole region to be ambitious for its future. This would include diversified funding for a comprehensive array of services and strategies for Regional Economic Delivery, that eventually spans Global Identity, Diversification, Gateway functions, Innovation Economy, Regional Benchmarking, Public-Private Trust and Communication, and Ecosystem Orchestration.

2. A clear and compelling set of demands and tactics for Federal Government, including for prioritised investment, asset relocation and conducive industry policy. This may mean learning how to work with Halifax, Ottawa and others to build a commanding case for mid-sized city regions.

3. Eventually recruiting the rest of the institutional framework and building momentum for full metropolitan strategic planning. When Greater Victoria's specialisation and innovation credentials start to grow the base of well-paying jobs and intensify housing, land and skills constraints, it will become essential to achieve a long-term regional consensus to maintain momentum and appetite for growth and success. An efficient multi-centre region will become more of a necessity.

Greater Victoria can chart a path to a future where it is instinctively intentional in adjusting to new economic circumstances, when it can orchestrate transition rapidly and purposefully with its partners, and when it is consistently able to negotiate advantageous relationships with higher tiers of government. These are the hallmarks of fluency in the global economy. They are also the route to a productive and sustainable future.

Introduction

Despite the shock of COVID-19, city regions remain fundamentally connected to the global economy. Yet they have different degrees of global understanding, competence, behaviour and reach. These 'traits' affect how they optimise their role in globalisation and ultimately impact on future progress and productivity.

The Business of Cities co-created and authored the International 'Ten Traits' framework with the Brookings Institution. For this paper The Business of Cities has applied this framework for Greater Victoria as an independent assessment. It has not sought authentication from Brookings to undertake this particular analysis.

Why global fluency matters

Global fluency is about how regions read the world, navigate the map of global opportunity, and develop the capabilities and outreach to continually succeed and compete.

Regions that are globally fluent are better able to turn the benefits of globalisation into long-term citizen advantages – better paying jobs, resilient industries and strong communities. The more globally fluent regions and their businesses and governments become, the better they will be able to influence their own destinies, and increase their competitiveness. Equally, these places learn how to minimise and mitigate the downsides of globalisation. City regions that cannot read global opportunity tend to get stuck in narrow economic formulas that ultimately reduce their appeal.

Achieving global fluency is like learning a new language. It is a long-term process that requires intentional efforts and willingness to take risks. Smaller city regions evolve from being globally aware, to globally oriented, to globally fluent—over the course of decades.

New pathways to enter and succeed in globalisation are opening up all the time. More cities than ever participated intentionally in the most recent cycle (2008-2020), and this trend is likely to continue after the sharpest effects of COVID-19 recede.

This report

This report evaluates Greater Victoria's position within the Ten Traits of Global Fluency framework, observing the city region's strengths and imperatives in each of the ten trait areas.

This evaluation is not designed as a comprehensive 'balance sheet', but as a strategically informed diagnosis, based on stakeholder dialogues, benchmarking analysis, and international practice and case studies undertaken between March and August 2020. These also inform **Report 1** and **Report 2** of this work.

The 10 traits evaluation below features comments and quotes made by stakeholders in Greater Victoria during interviews and roundtables conducted in May and June 2020.

The 10 Traits of Global Fluency	
1. Leadership with a Worldview	**6. Opportunity and Appeal to the World**
2. Legacy of Global Orientation	**7. International Connectivity**
3. Specializations with Global Reach	**8. Ability to Secure Investment for Strategic Priorities**
4. Adaptability to Global Dynamics	**9. Government as Global Enabler**
5. Culture of Knowledge and Innovation	**10. Compelling Global Identity**

Source: Brookings Institution (2013) Ten Traits of Global Fluency

The Ten Traits model identifies the common journey cities and regions take from (1) Globally Aware to (2) Globally Oriented and (3) Globally Fluent.

Cities in Stage 1 — Global Awareness — are preoccupied with the domestic context; they have some internationally traded sectors and certain players read the global market with some level of proficiency, but the city as a whole is not yet able to speak or listen fluently. They do not yet have momentum for a unified effort to embrace global dynamics and enact local change.

Cities in Stage 2 — Globally Oriented — have a broader set of local business, government, universities, and non-profits connected to global markets. They adopt a vocabulary and lens of global competition and global contribution, and build metrics and strategies to match. They start to seize more of the opportunities that come their way through intentional behaviour. They understand implicitly the ultimate advantages of continuously seeking to increase global reach, visibility, and influence. **These are the hallmarks of Stage 3 — Global Fluency.**

We can observe that Greater Victoria currently is starting to shift from Stage 1 to Stage 2 of this journey.

This initial summary points towards the progress in each trait and potential to take the next step.

1. Leadership with a worldview

Local leadership networks with a global outlook have great potential for impact on the global fluency of a metro area.

There is a high level of latent ambition in the Victoria region, underpinned by high civic trust and goodwill and a commitment to shared prosperity. Current elected city leadership is viewed to be effective, bold and consensus-oriented. There is growing confidence in Greater Victoria's capability and competence, abetted by recent figures that it is one of the fastest recovering regions in the world from COVID-19. Many recognise the chance to stake a leadership role in larger arenas, as Greater Victoria heads towards a population of 500,000.

But the overall impression is that leadership is disjointed and the ambition not fully calibrated. Greater Victoria has been unable to decisively decide what the priority should be. Ocean innovation can be a catalyst around which the region can build.

Initially, Greater Victoria's positioning can be led by the City of Victoria, and many regions have begun their journey with visionary core city leadership and a persistent City voice for the region. Over time however, small regions need conducive metropolitan governance to achieve the scale of reach and investment. Currently metropolitan governance is missing in Greater Victoria. The 13 municipalities that make up the region (plus the Capital Regional District Board) are not co-ordinated, and there is no natural forum or guiding mind for the region. There has been very slow progress with reforms to local government or the possible creation of a directly elected regional council. Inter-municipal competition for resources remains strong. The result is Greater Victoria does not easily mobilise higher levels of government around a common proposition and better ensure key decisions about regional priorities and investments are evaluated through a global lens.

Leadership also comes from outside of Government. The soft leadership roles of Business do not appear to be sufficiently developed. Business is too remote from much of the political leadership. There is not currently enough impetus within the Chamber of Commerce, and the gravitas of the five-year-old metropolitan alliance — the South Island Prosperity Partnership — is still in its early stages. Most stakeholders regard B2B and B2G relationships as too decentralised and informal and ad hoc.

There is growing confidence in Greater Victoria's capability and competence, abetted by recent figures that it is one of the fastest recovering regions in the world from COVID-19.

Greater Victoria also needs local and international champions and ambassadors. The region benefits from many ambitious and capable leaders, but few stakeholders can readily name individuals who act as independent voices on behalf of the future of Victoria. The region is home to many people who have come from elsewhere who have an interest in making it better, but few have been harnessed to lead strategically. The next task will be to recruit more business and institutional allies to lead this effort into the next phase.

2. Legacy of global orientation

Due to their location, size, and history, certain cities were naturally oriented toward global interaction at an early stage, giving them a first mover advantage

Modern Victoria was founded 180 years ago as a region of trade, and long-distance links were built in to its DNA and identity. Victoria's early success as an entrepot was a product of its gateway location, its port, its British legal and financial frameworks, and its openness to entrepreneurship. These remain relevant to the region's edge today.

Victoria welcomed diverse newcomers through several cycles of economic boom, bust and change, and its leadership from the start had an eye on global opportunity associated with the region's port and resources. Deep links to the UK and early designation as a seat of government have made Victoria unusually conscious of global values and trends.

> ***"In a way we've always felt at the edge of things, but now the proximity to Asia, climate change, and the strategic importance of the Pacific changes that. We have to change our behaviours accordingly."***

Greater Victoria inherits physical assets that remain decisive advantages as the global economy evolves. Its natural deep-water harbour is a key differentiator. It has an outstanding natural geography and a conducive climate, while as an island it also inherits something of a 'safe haven' status.

These natural assets have only just started to be explicitly recognised and taken advantage of. Up until now, most of Greater Victoria's economic health has been something of a happy accident.

Changing geopolitical dynamics also make this a decade of opportunity for Greater Victoria. The Pacific Rim is a global centre of gravity where much of the planetary pivot towards sustainable growth will be won and lost. This is also a decade of Arctic Ocean exploration for which Greater Victoria is a gateway.

The rise of new advanced industries and the Pacific-leaning centre of gravity also provides Greater Victoria with an opportunity to differentiate itself from city regions on Canada's East Coast, as a region committed to sustainable and inclusive growth industries (as opposed to extractive and non-broad based).

3. Specialisations with global reach

Cities often establish their initial global position through a distinct economic specialization, leveraging it as a platform for diversification.

Greater Victoria has a small but diverse ecosystem that includes AgTech, CleanTech, CivicTech, and a growing Marine Cluster. There is clearly a lot accumulated expertise spurring companies to early success in competitive markets. The presence of institutions such as the Coastguard, the Navy, Ocean Networks Canada, and post-secondary educational institutions, are an important advantage in driving investment.

There has been at least some track record at clustering technology companies in suburban business parks. There is also a fairly small but growing community of VC funded and impact-funded Indigenous businesses, with opportunity to become a leading Indigenous entrepreneur ecosystem in North America.

Global positions are established by leveraging a distinct niche – a cluster, business environment, natural resources or strategic location. However, we have observed the need for a clearer focus in Greater Victoria on the economic specialisations and innovation leadership. There appears a lack of agreement as to the pathways to specialise and what kind of company mix Greater Victoria really should be a great place for. Big firms on north Vancouver Island do not seem to be currently mobilised to play a role in the ecosystem or the prospective.

> ***"There are constantly new incubators or hubs being set up — we seem to be very good at that — but we're missing the mentors, the execution, the networks, the business growth skills."***

What we have seen suggests that the region will not just need a compelling economic development strategy document. It also needs catalysts to drive specialisation, which will include more anchor tenants in the City Centre with an international footprint. Into its second phase it will need to show clear wins to build interest and attention from higher tiers of government and confident ownership of the strategy by business and post-secondary institutions.

4. Adaptability to global dynamics

Cities that sustain their market positions are able to adjust to each new cycle of global change.

Greater Victoria has enjoyed a long period of relative economic prosperity and insulation from the volatility and externalities that other cities experience. The economy has been spread throughout cities and suburbs and hinterlands, and much of it is accustomed simply to selling the current product (degrees, holidays, retirement homes). With an exceptional natural environment, few growth constraints, and an improving lifestyle brand, adaptability and intentional adjustment has not been required up until now.

Many commentators have remarked that the problem is that there is no clear 'burning platform' for Greater Victoria. There is no 'clear and present danger' that presents a compelling reason to act and to make real changes. The geopolitical dynamics in the Pacific also, it is thought, will allow Greater Victoria to attract more diverse talent and participate in the high value Pacific markets.

Greater Victoria has only just begun to diversify from dependence on the Public Sector, the Military and Tourism. The challenge will be to do so more rapidly and effectively. Tourism and higher education in particular may become more vulnerable, especially as customers become more competitive and discerning. Japanese higher education, Korean ocean expertise, Taiwanese health care, and holidays in Greater China and ASEAN are all part of the emerging picture.

> ***"The response I get from people is always, 'why should I care? why should we change?' They take the good life as a given rather than something we all have to actively maintain."***

Greater Victoria is well placed to adapt successfully to the new post-Covid normal. One feature of the region's economic structure and geographic location is that upper income Victorians have been remote working for most of their lives. The region can benefit from a shift to smaller agile teams, and a corporate culture shift towards greater employee ownership, and more mission-driven business. But high value sectors and activities will still need high-amenity urban locations for their well-paying jobs.

One of the main risks of failing to adapt is growing frustration among the motivated people who live and work in Greater Victoria but are impacted by higher costs and eroding lifestyles. Sustained success will soon reveal underlying weaknesses and fresh horizons, just as other smaller cities such as Austin have found.

The burning platform needs to be clearly articulated. Without a change:

- Greater Victoria will slip into a low amenity, high cost, high commuting model along growth corridors, with few varied combinations of lifestyle choices, and a reduced sense that hard work will produce prosperity.
- Greater Victoria will become vulnerable to different kinds of economic shock. The institutional framework does not easily produce collaborative governance, sustained consensus, or a path for the private sector to provide a leadership role when adaptation of the urban environment is required.
- Greater Victoria will not continue to attract or retain top talent. Without more jobs clustered with high amenity lifestyles in cities, through better use of land to promote mixity and proximity, Greater Victoria's ability to attract working-age residents may come under threat. Dependency ratios will rise.

5. Culture of knowledge and innovation

In an increasingly knowledge-driven world, positive development in the global economy requires high levels of human capital to generate new ideas, methods, products, and technologies.

Greater Victoria has a strong ethos of entrepreneurship. While part of its progressive outlook includes a large and vocal anti-business and anti-growth perspective, the overall propensity is one of autonomy, self-help and pro-prosperity. The relative seclusion and self-selection of the labour force fosters a community and cooperative mindset.

However from an ecosystem point of view it is apparent that Greater Victoria's commercialisation chain is incomplete - companies and ideas do not find a very active capital market to tap into. Companies that grow to a certain size usually have to move out, due to talent and resource constraints.

Greater Victoria is home to two universities, three colleges and two art schools, that are all collaborative and complementary. They invest in joint marketing. These post-secondary institutions support the production of capable professional and artistic talent as well as Greater Victoria's emerging global strengths in oceans, clean energy, carbon management and climate science. With 20% of international students staying in the region, they also serve a talent retention function. Relative to other city-regions the education system has fairly strong provision for disadvantaged populations.

There is a recognition that these institutions need to take next steps to take advantage of their combined capacity for purposes of advocacy, impact and commercialisation – and that this is more urgent given likely provincial and federal treasury strains in coming years. The track record of commercialisation is not strong, despite the presence of many incubators and accelerators, not helped by a pervasive 'build it and they will come' philosophy. Know how appears to be more of a challenge than mindset.

> ***"There is a need for greater intentionality and architecture around local relationships. We don't quite get it right, but we don't quite know why."***

Currently no major university or college campuses are Downtown, despite many propositions. The institutions have not seen the business case adequately made. Over time this will become a major disadvantage to Greater Victoria.

Despite regular predictions to the contrary, not least in this post-Covid scenario, businesses and other large employers will continue to favour Downtowns because of superior visibility to customers, greater access to talent, and opportunities to cluster and collaborate productively. High amenity Downtowns with sizeable residential populations consistently prove to be the places best equipped to meet lifestyle preferences and act as the magnet of tourism, leisure, culture and identity-building. Most peer regions to Greater Victoria internationally have knowledge institutions as major players Downtown, to serve an enlarged market, anchor the new economy, share infrastructure with business, and support inner city communities.

Establishing an Ocean Innovation Hub is a key opportunity to sharpen the region's innovation edge. Leadership of this agenda should include a laser focus to optimise the standards of membership, incentives for collaboration, and improved global linkages to monitor global market conditions.

6. Opportunity and appeal to the world

Metro areas that are appealing, open, and opportunity-rich serve as magnets for attracting people and firms from around the world.

Greater Victoria has magnetism as a compact region for people seeking a certain kind of relaxed quality of life with superb natural assets, alongside a quality of career opportunity and very strong high schools, private schools and post-secondary institutions.

Greater Victoria stands out in North America in having closely interconnected urban villages around a central core with excellent access to parks, beaches and amenities. The urban skeleton of Greater Victoria is a strong platform to build additional appeal.

However Greater Victoria is not yet perceived as synonymous with entrepreneurial spirit, unique cultural assets and experiences, accepting attitudes, or respect for religious and racial diversity. It also does not appear that new and established Victorians habitually spread information about the city worldwide through their family and business networks.

> ***"As a region we have great connections overseas but for some reason we are too shy to tell our friends, and our friends of friends, all about what makes Victoria special. Other places I go, I see locals setting up businesses that serve the countries where they have ties, always making the pitch about why this is a great place to work or to settle down."***

Only some leaders in Greater Victoria currently perceive talent and proficiency of the labour force as a critical gap, but this concern is likely to grow as the innovation imperative becomes more widely grasped. Providing more pulls for younger people to stay will have to be a priority. This is principally a question on the one hand of vibrancy, variety and housing affordability, and on the other hand of larger business HQs, strong business brands and anchors, and the ability to forge nimble teams in a more distributed economy after COVID-19.

7. International connectivity

Global relevance requires global reach that efficiently connects people and goods to international markets through well-designed, modern infrastructure.

Connectivity will remain critical in the post-Covid economy, to reach the international marketplace and connect people and decision-makers. Local roads, rail, public transportation, as-a-service transport, and bike and walking paths, are also essential as more people seek a version of the '20 minute city'. So is the spatial arrangement of households, businesses, and amenities in relation to that infrastructure, or what economic developers call "spatial efficiency."

We noticed that few stakeholders interviewed had a strong spatial lens of where the economy is, how it should cluster, and the relationship between density and productivity. In globally fluent city regions, there is a more established conversation at play about what different districts and neighbourhoods require in terms of land use, mobility and placemaking to foster innovation, depending on their location and economic composition.

In previous cycles air connectivity has not been perceived as a significant barrier to growth. Victorians have a muscle memory of getting off the island to Vancouver and beyond.

> ***"If there is one quick win we have to address, it is the border preclearance that makes nonstop flights to the U.S. viable. Halifax has done it. So must we."***

But optimising flight connections and clearances to Seattle, San Francisco and other centres is an important priority if Greater Victoria is to become a place where a daily return business trip is practical and manageable. Greater Victoria ultimately will need improved connectivity to key West Coast hubs as well as other centres such as Denver and Austin.

8. Ability to secure investment for strategic priorities

Attracting investment from a wide variety of domestic and international sources is decisive in enabling metro areas to effectively pursue new growth strategies.

Protecting and reinvesting in city systems has not been described as a critical gap in Greater Victoria in recent years. Many of those we interviewed did not view public investment deficits as a major barrier, which is in itself an indication that relative to other city-regions there has been a satisfactory level of continuous re-investment. Most are content with standards of education, mobility, health, energy, utilities and leisure infrastructure.

Infrastructure enablers that have been mentioned include:

- Improved rail connectivity to suburbs
- Much improved public spaces and international calibre places and amenities
- Bringing post-secondary institutions into the City Centre

> ***"It's going to be very important that we get the investment in resilience to charge our economic recovery. We have to get on the front foot in making the case for low carbon investments, climate mitigation, and the kind of infrastructure that can really drive our marine sector."***

Investment is not just a means to create assets. It is also a tool to grow and change. To attract multiple sources of investment, regions need to align with the needs of both public and private investors through their value-added development strategies, compelling identity and consistent leadership. If more investors outside Greater Victoria can see the region's long-term path to success, and clear pathways to co-investment, then the region will capture more capital for innovation and infrastructure projects.

9. Government as global enabler

Federal, provincial, and local governments have unique and complementary roles to play in enabling firms and metro areas to "go global."

Greater Victoria will need multiple levels of governments to provide co-ordination, visible leadership and on-the ground advocacy on behalf of regional business in foreign markets, and on behalf of the region to federal government. The provincial government in particular sets the tone for how globally engaged Victoria can aspire to be by establishing the level of appetite, transparency and dependability.

> ***"A global Victoria will have a stronger presence and influence in Ottawa, probably working alongside other cities."***

There does not appear to be a strong history of partnership between levels of government to support Greater Victoria's international competitiveness. Higher tiers of government have not historically appreciated the unique specialisations and potential of Greater Victoria, although the ocean opportunity is starting to change this. The provincial government has not wished to be seen as favouritist to its capital city, and has been more focused on remote communities. Continuing to alert the provincial and federal governments to Greater Victoria's ambitions, and helping federal government to see Greater Victoria's proposition as a global hub for low-carbon ocean technology, will be a serious task.

Within the region itself there are clearly constraints around:

- High levels of local government fragmentation leading to incoherent strategies and initiatives
- Few clear incentives or obligations for local governments to build common cause beyond the basics
- Low innovation in terms of place management, public-private partnerships, demonstration projects and pilots
- Low expectations of what business and civic leadership can contribute to urban and metropolitan governance and overly high reliance on Government and Policy solutions
- Barriers around how land use decision-making takes into account (or not) the full set of economic spillovers and multipliers of development

10. Compelling global identity

Cities must establish an appealing global identity and relevance in international markets not only to sell the city, but also to shape and build the region around a common purpose.

Greater Victoria's identity within Canada has gradually been taking sharper form. At the same time Canada's brand in the 21 century has been rising relative to United States, while the British Columbia brand within Canada has also become more distinctive.

Some distinctive assets and advantages of Greater Victoria's identity can already be observed:

- The deep DNA of Victoria with its role in ancient human migration and settlement, trade instincts, and high quality of contemporary indigenous business and culture.
- Inspirational landscape. The scenery, topography, and climate. Victoria's history and geography touches on deep human themes.
- Composure and Competence. The Victorian mindset and sense of personal and civic autonomy, and unpretentiousness, which drives innovation and excellence. The fact that Vancouver Island is now mainly COVID free is another demonstration that Victoria is lucky, but also smart and well organised.
- Tech with a social conscience, and a broader commitment to global values and fairness.

However Greater Victoria's overall Identity and Story is fundamentally missing. A pattern of eager but disjointed storytelling is apparent.

> ***"There's a willing choir but not an agreement on the hymn sheet. People want to sing, but don't know the lyrics."***

Behind this lie a series of imperatives to:

- Overcome a Zero Sum mindset between left and right, public and private sector, and between municipalities, by pursuing common agendas.
- Demonstrate when and how jobs and capital have a positive collective effect
- Deploy tools, visuals, demonstrations, and data more effectively

An important part of the identity process is also about re-centring the role of indigenous populations and communities in the story and the future of Greater Victoria. Global identity is also a vehicle for inter-cultural understanding, corporate citizenship and business leadership.

References

1 Brookings (2013), Ten Traits of Global Fluency

The Business Of Cities

The Business of Cities is an urban intelligence firm that works with cities and companies worldwide. It uses advanced benchmarking and comparative analysis to help leaders to respond purposefully to the twin dynamics of urbanisation and globalisation. Over the last 10 years it has supported public and private leadership in cities and regions such as Amsterdam, Auckland, Glasgow, Helsinki, London, Oslo, Philadelphia, San Diego, Sydney and Tel Aviv, and collaborated closely with international organisations such as the OECD, World Bank and Brookings Institution.

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The authors would also like to thank **Laure Wassen** and **Ben Gowers** for their contributions

Financial Plan Motions - Report Back

VICTORIA 3.0 RECOVER REENVENTION RESILIENCE 2022-2041

That Council direct staff to bring back as part of the 2021 financial plan:

1. Proposed 2021 actions for consideration as part of the *Victoria 3.0 Recovery Reinvention Resilience 2020-2041* economic action plan.

BACKGROUND:

Victoria 3.0 Recovery Reinvention Resilience 2020-2041 is an economic action plan that accompanies the City's *Official Community Plan* to 2041. It's a long-term plan and vision for a sustainable, influential city that will build a strong innovation ecosystem and create a strong and resilient economy now and for the future. The actions laid out will build an economy that enables everyone to flourish and that will set Victoria on a path to low-carbon prosperity.

Victoria 3.0 has 3 main goals; 1) an immediate focus on supporting businesses to adapt to a new normal and become more resilient in light of experiences and lessons learned during the Covid-19 pandemic, 2) create a City and an economy for everyone, 3) to build our economy over the next two decades within the boundaries of the Earth's capacity to sustain us, Victoria 3.0 will be coupled with the City's Climate Leadership Plan for a pathway to low-carbon prosperity.

FINANCIAL AND HUMAN RESOURCE IMPLICATIONS:

The 2021 actions outlined below can be achieved within the proposed 2021 draft budget.

Support Small Business:

- Create a Downtown Clean and Safe Committee - during the COVID-19 pandemic with businesses closed, there was an increase in crime and graffiti. A Clean and Safe Committee will help meet the needs of business owners and ensure that downtown is safe and welcoming for all.
- Create a Downtown Ambassador Program - modelled on best practices from other cities (Winnipeg, San Francisco, Kelowna, Baltimore) develop a program to increase a sense of safety and welcoming in the downtown for all. The program will be a resource to businesses, downtown residents and visitors, will reduce the front-line resource requirements for police and will provide a visible and welcoming presence for all. The Downtown Clean and Safe Committee will help support the development work of the Downtoan Ambassador Program and the DVBA will be a key strategic partner.
- Develop and deliver a mitigation strategy to help address the impacts of private sector construction and City capital projects on the daily operations of small businesses - with significant business disruption as a result of COVID-19 and to help businesses with a speedy recovery, improve engagement with businesses when there are disruptive construction projects
- Develop a Retail Strategy - during the COVID-19 pandemic, people were told to stay home. This resulted in an increase in online shopping and people getting out of the habit of coming downtown. And, while Victoria had a historically low retail vacancy rate going into the pandemic, we will likely have a higher rate coming out. A retail strategy is a key recovery policy to create an amenity-rich downtown and village centres. It will provide a targeted approach to ensure both short and long-term success of the downtown retail core as well as retail in neighbourhood village centres.

Financial Plan Motions - Report Back

Support Newcomer Businesses:

- Business Hub information and materials in translated versions in order to maximize the ease of understanding and compliance - this action signifies that the City is open to newcomer businesses and businesses run by new Canadians and wants them to feel part of the community. Additionally, these materials could offer tip sheets on how to succeed in the Canadian cultural and business context. Newcomers can sometimes be surprised by cultural differences between Canada and their home country. The Business Hub will translate materials into two priority languages per year

Create an Arts and Innovation District:

- Pilot a pop-up Micro Innovation District - this is a small, highly visible project to attract attention and get people to dream of what is possible.
- Undertake a City-initiated rezoning of the Innovation District – a city-initiated zoning will cut red tape and save time and money for land owners at the same time as preventing displacement of existing residents, businesses and artists.
- Develop a name and identity for the Innovation District - the name and brand will need to tell the story of the area – its history, its present day story and its future aspirations.
- Develop partnerships with postsecondary institutions to support activities in the Innovation District

Create an Ocean Futures Cluster:

- Champion the Ocean Futures Cluster and Innovation Hub with Provincial and Federal governments
- Build relationship and create programs with Canada's Ocean Supercluster
- Secure funding to establish Ocean and Marine Innovation Hub - secure Industrial and Technological Benefits (ITB) funding, secure Western Diversification funding, explore creative financing models
- Develop an Ocean and Marine Innovation Hub – scope a pilot phase and some test cases, establish or identify a bricks and mortar space/spaces to incubate the Ocean and Marine Innovation Hub, determine a feasibility/business model for an Ocean and Marine Innovation Hub in Victoria and work with partners to establish provincial “spokes” that feed into and out of the Hub
- Develop a Governance Structure for Cluster Implementation – develop a flexible, inclusive governance model that will foster communication, collaboration, cooperation, and inspiration.

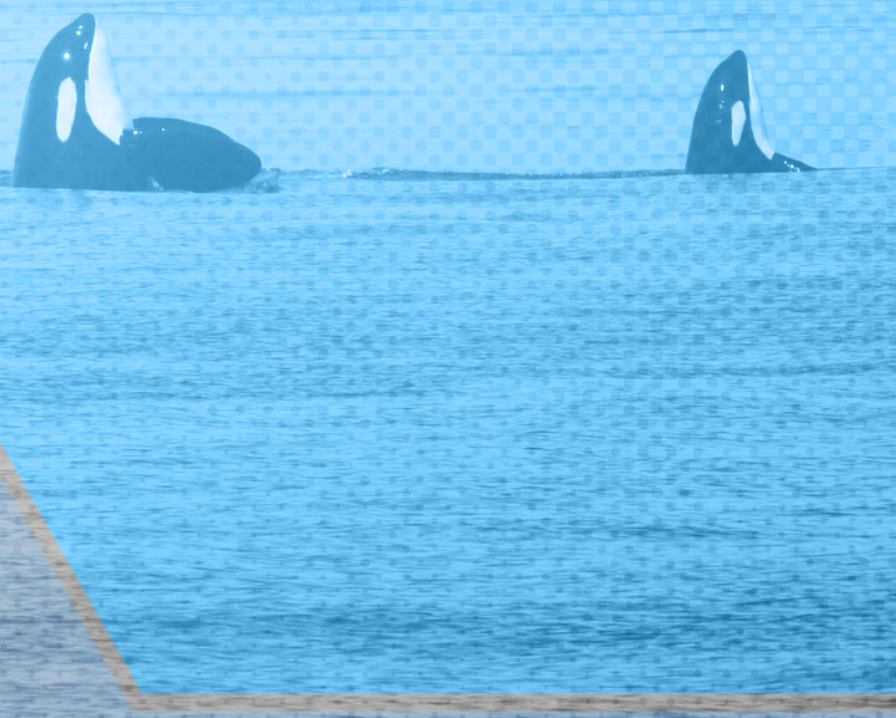
SOUTH ISLAND
PROSPERITY
PARTNERSHIP

OCEAN FUTURES HUB AND CLUSTER

ON SOUTHERN VANCOUVER ISLAND

BUSINESS CASE

CONDENSED



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The Ocean Futures Hub and Cluster concept was created and put forward by the City of Victoria in partnership with the South Island Prosperity Partnership and the Association of British Columbia Marine Industries, as an initial opportunity to develop a globally fluent economy on the South Island. The project business case was funded by Western Diversification Canada, which has identified the development of clusters as a strategic priority for investment in 2019-2020, and supported by a consultants from Urban Systems, Engage // Innovate, and HATCH. The business case and feasibility study for OFH&C also lays the groundwork for the future development of Victoria's Art and Innovation District and Pacific Canada's blue economy ecosystem.

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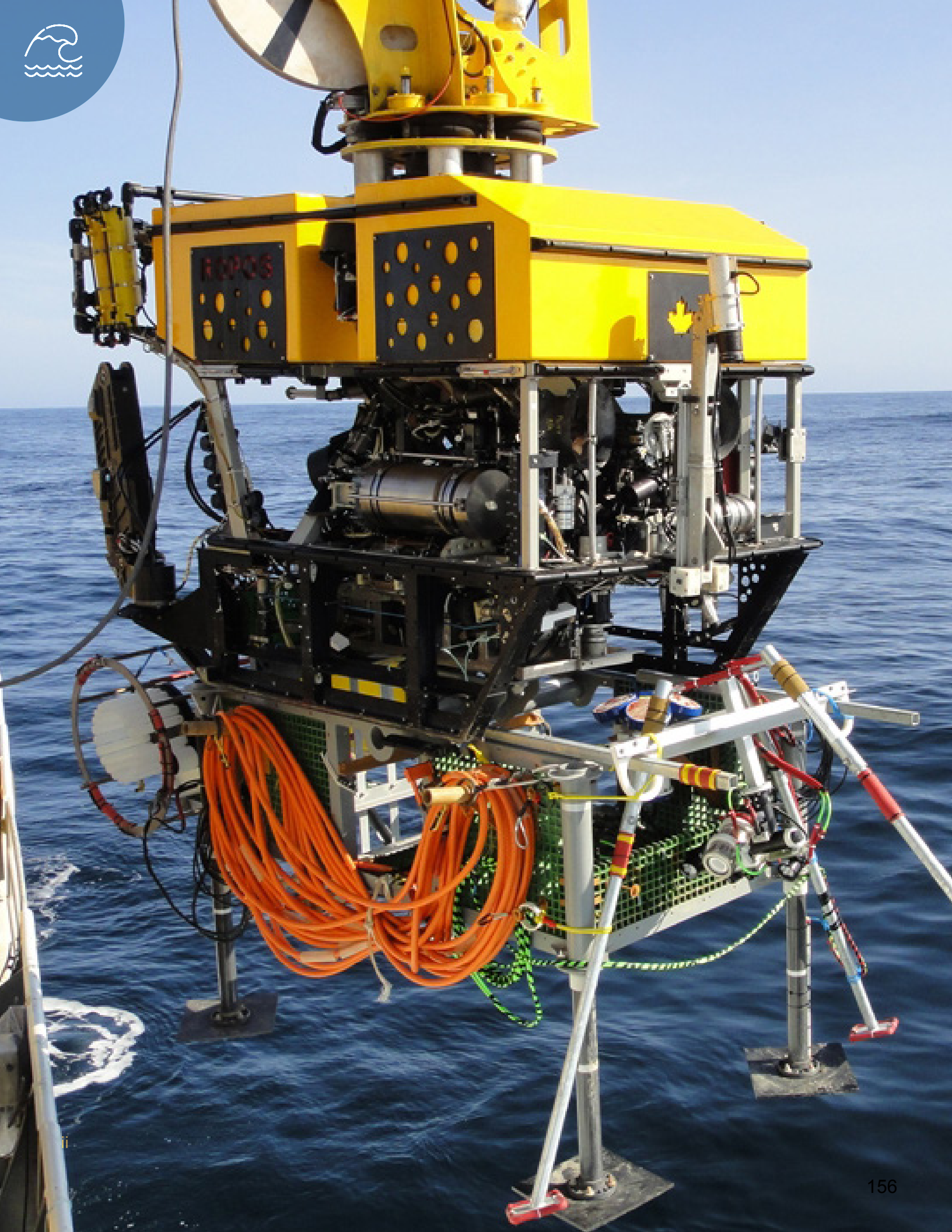
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EXECUTIVE SUMMARY

THE VISION

A global ocean technology hub to drive ocean industry transformation for the 22nd century.

With the longest coastline in the world, Canada has access to an array of marine resources. A long tradition of development through our connections with the ocean, coupled with our position as one of the world's 10 largest economies by GDP has made us a leading player in the ocean economy. With a global shift towards more sustainable use of resources, as laid out in the UN's Sustainable Development Goals, development of the ocean economy, which is expected to reach $3 trillion by 2030, has been rapidly shifting toward a more sustainable model known as the blue economy.

This report lays out the business case for the establishment of a new Ocean Futures Hub and Cluster (OFH&C) which will be a vehicle for industry leaders, entrepreneurs, researchers, governments, and investors to accelerate Canada's position in the global ocean technology sector with a blue economy focus. Initiating an ocean innovation cluster in Pacific Canada will complement other regional initiatives such as COVE in Halifax. The OFH&C is a long-term investment in our national competitiveness, to compete and win in the blue economy.

The OFH&C will be the foundation that nurtures a regional economic ecosystem focused on the global blue economy. These regional economic ecosystems are often referred to as "clusters". The physical location at the core is referred to as the "hub". The hub will host the team that runs the OFH&C and provides opportunities for co-working and co-location for members that wish to access shared facilities and services. The OFH&C will also offer people-centric programs, events, and facilitated networking.

OFH&C is important to support Pacific Canada in developing more resilient economies that can adapt to global dynamics, support new high-value, future-oriented jobs and enterprises. It will leverage the strengths of Pacific Canada actors while building industry capacity by developing and attracting, a highly skilled and adaptable workforce. OFH&C

will foster innovation in products, people, technology and ideas within Pacific Canada and the globe. Locally, the OFH&C is also a foundational action to Victoria 3.0, an economic development plan that also includes the creation of an Arts & Innovation District that supports revitalization of a neighborhood and an underused part of the port and waterfront.

120+ stakeholders co-designed the OFH&C concept through a series of engagements described and summarized in this report. The ocean and marine leaders that participated shared their opinions on the strategy, structure, governance, financing, and key strategic initiatives for the OFH&C, as well as the current challenges and future of the blue economy in Pacific Canada. A key theme that emerged was the need for more collaboration among existing companies and with government and academia. New alliances can increase effectiveness, gain more international contracts, and attract significant new investment into the region and Canada.

First Nations have been and will continue to be consulted as the OFH&C develops. They have deep cultural connection to the sustainable use of ocean resources and can contribute to the development of locally relevant responses to global opportunities in the blue economy. Meaningful inclusion of First Nations as partners in this initiative creates an opportunity to also advance the reconciliation agenda in Canada. Collaboration with First Nations would for example allow for advancing environmentally beneficial applications of technology such as renewable ocean energy (especially offshore wind) and improving on aquaculture practices.

Four strategic pillars were identified through the stakeholder engagement process:

1. **Innovation cluster** for capacity/skill development and shared ocean technology R&D

2. **Entrepreneurship programs** that boost local startups and make the OFH&C a global magnet for ocean tech startups focused on the blue economy.

3. **Real estate** development of a large co-location cluster of ocean and marine enterprises. Starting out with a co-working space and testing facilities and over time growing to more than 100 companies.

4. An **ocean venture fund** that provides early-stage seed financing through later-stage growth financing, focused on technologies that relate to the blue economy. The fund will have a clear for-profit mandate and will be managed by a professional venture team, allowing for rapid growth and deployment.

The ten-year 2030 strategic plan aims to position the OFH&C as a global player with a strong, international position in the global economic ecosystem for the ocean economy. The ambitious set of goals for 2030 include 1,000 new high-value jobs in British Columbia, 50 new companies started, and 100 companies located in a cluster that fosters further innovation in the blue economy.

WHAT WILL IT TAKE TO GET THERE AND MOVE US TOWARDS BECOMING THE LEADERS TRANSFORMING OCEAN INDUSTRIES FOR THE 22ND CENTURY?

Lower levels of initial investment will allow the OFH&C to get started and begin building programs that will draw in additional funding to achieve the overall vision. The following examples show what could be achieved if various levels of funding are secured. At the lower levels there will be a significant economic impact on the regional economy, but it will take full funding participation of industry, government and investors to have a transformative effect on the global ocean economy.

$5 MILLION:

Create a co-working space, a basic venture fund, a startup incubator, and basic programs

$50 MILLION:

Operational co-working space with 50 companies co-located, a $5 million micro fund, incubator and start-up programs with good partnerships, strong industry participation opening up new markets for Canadian companies

$100 MILLION:

Multiple buildings, 70+ co-located companies and test sites, $50 million venture fund with growing angel network, strong ocean tech cluster with global participants and strong collaboration

$160 MILLION:

World class ocean tech innovation district with 100+ companies co-located providing test sites and co-working space, two venture funds with $250 million AUM and global significance acts as a magnet for companies to locate in Canada, fully staffed world-class accelerator with multiple programs, and a globally recognized ocean tech cluster with 300+ members driving sector transformation

Financing new clusters and hubs is always a challenge. Many places such as in Europe, Southeast Asia and the US have national programs and detailed structures to fund new cluster initiatives. This is not the case in Canada, putting us at a disadvantage against comparable countries like Norway. With a broad partnership of both the private sector and government, it would be possible to develop the OFH&C at a globally impactful scale.

GOVERNMENT FINANCING:

- **Federal government**
  - Western Economic Diversification (Regional Innovation Ecosystems)
  - Department of Fisheries and Oceans (as part of the blue economy strategy)
  - INAC or others (Support the inclusion of First Nations partners in a hub & spoke model)
  - COVID19 economic restart stimulus funding

- **BC Provincial government**
  - CleanBC
  - InnovateBC
  - COVID19 economic restart stimulus funding

- **Local government**
  - Staff secondments for first phase of OFH&C startup
  - City of Victoria through connecting to master planning for waterfront redevelopment and interactions with real estate developers

PRIVATE SECTOR

- Industry Funding through Industrial and Technological Benefits Policy investment by larger ocean economy companies
- Procurement and R&D support for OFH&C members from large industry players such as BC Ferries
- Membership fees from existing ocean economy companies operating in the region
- In the longer term, proceeds from real estate development activity at the hub
- Venture Capital funding sourced globally (unlocked through the de-risking that would result from large-scale funding of OFH&C by government and industry)

With a significant infusion of early seed funding from government, the OFH&C will be positioned to leverage co-investment from industry and follow-on investment from the global venture capital community. This coordinated collaboration would make a decade of transformation possible. Examples are provided in this report of where this has been successful before on a similarly ambitious scale and over a similar timeframe.

Canada has an opportunity to claim a space as a global leader in the blue economy through investment into developing a hub for ocean innovation in Pacific Canada. The time to seize this opportunity is now.

1.0 OVERVIEW

1.1 WHY START AN OCEAN FUTURES HUB AND CLUSTER?

The Ocean Futures Hub and Cluster (OFH&C) is a national vehicle to accelerate Canada's position in the global ocean technology sector. The OFH&C is a long-term investment in our national competitiveness, to compete and win in the global ocean economy.

Together with Canada's Ocean Supercluster and the growing number of ocean projects, like the Ocean Startup Project, the OFH&C is helping grow and expand Canada's blue economy towards the 22nd century. A substantive funding commitment would also be a fitting way to show global leadership and kickstart our participation in the United Nations Decade of Ocean Science for Sustainable Development.

Supporting the creation of an OFH&C with funding would be a meaningful demonstration of Canada's public commitment to the implementation of the United Nations' 2030 Agenda and its Sustainable Development Goals, particularly SDG#14.

Canada has been a global leader in investment into in Ocean Science and Technology, with particular strengths in ocean research funding to universities as evidenced locally through Ocean Networks Canada. Although the investment into COVE showed leadership in partnerships with industry to stimulate economic activity, Canada is falling behind its peers in the ocean investment space. Countries like Norway, Iceland, France, the United States, and Singapore have funded development of their ocean clusters on a larger scale for decades, giving companies there a substantial advantage. Funding OFH&C and continuing to support the Centre for Ocean Ventures & Entrepreneurship (COVE – a collaborative facility in Halifax similar to what is envisioned for the OFH&C) is one of many initiatives needed over the coming decade to elevate Canada into a globally leading position within the blue economy.

OFH&C is a system-solution to a large national challenge: how do we transform Canada's economy from a resource extraction economy to a knowledge-driven, technology-based economy with scalable business models for new economic growth? This is a challenge that must be addressed in a collaborative, national solution. A solution for all Canadians.

What problems are we trying to solve?

- How can we transform Pacific Canada's ocean industries for the 22nd century?
- How can we build a world-class innovation environment for large companies, small companies and fast-growing start-ups to connect, collaborate and win in global markets?
- How can we make Pacific Canada a global leader in the new, high technology ocean industries that are emerging?
- How can we build new high-growth companies with high-value jobs?
- How can Canadian companies compete and win in the ocean industries of the future?

1.2 STRATEGIC PILLARS

The Ocean Futures Hub and Cluster will build on four strategic pillars:

1. **Innovation cluster** to accelerate the transformation of our existing ocean industries through capacity development, skill development, learning and development of new, co-created projects amongst key members from companies big and small.

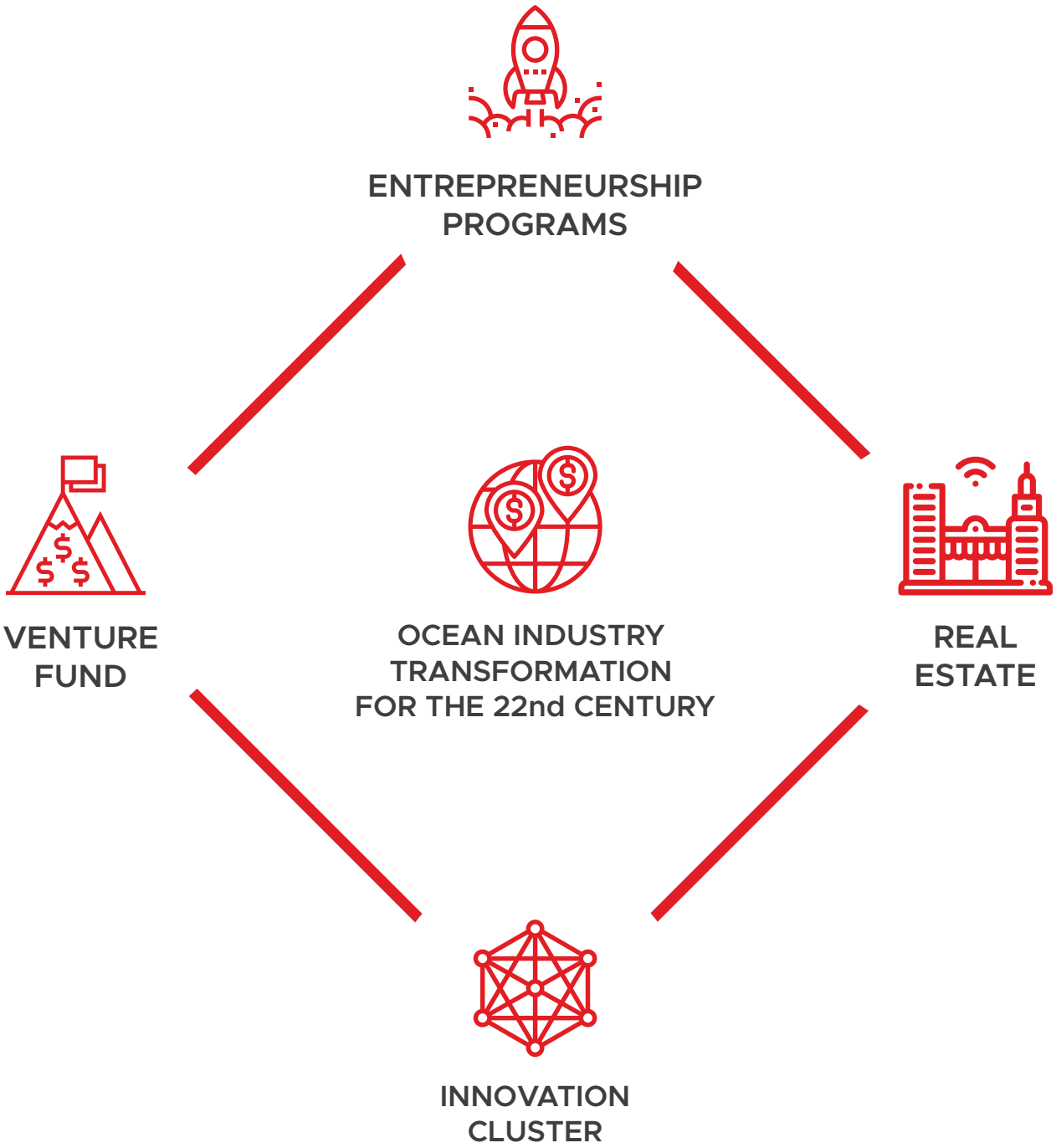
2. **Entrepreneurship programs** to build a culture of entrepreneurship in the blue economy. These programs will range from local startup programs to global accelerator programs, open to all ocean tech startups globally. The existence of these programs and associated funding streams will encourage global startups to locate in British Columbia so they can access the OFH&C's world class incubation and accelerator support. Through these programs, British Columbia aims to become a global magnet for ocean tech startups, all connecting into the thriving ecosystem in Victoria and beyond.

3. **Real estate development** of a large co-location of ocean and marine enterprises. Starting out with a co-working space and expanding into testing facilities and a wide range of shared innovation infrastructure, available to all members. Over time, we expect more than 100 companies and organizations co-locating with the Ocean Futures Hub and Cluster.

4. **An ocean venture fund** that provides early-stage seed financing to later stage growth financing, all in the ocean industries. This fund follows similar models from those of Norway and Switzerland. The fund will have a clear for-profit-mandate and will be managed by a professional venture team. The fund is expected to deliver a significant risk-adjusted return to the investors over the coming 15 years.

OCEAN FUTURES HUB AND CLUSTER

STRATEGIC PILLARS



1.3 THE AMBITION – VISION 2030

With a significant infusion of early seed funding, the OFH&C will be positioned to leverage co-investment from industry and follow-on investment from the venture capital community. Through the collaborative efforts of government, industry, academia, the investment community and entrepreneurs, a decade of transformation is possible. In this report, we will cite several examples where this has been done before, on a similarly ambitious scale and over a similar timeframe.

By 2030 we will:

1. Establish OFH&C as one of the top ten ocean technology clusters globally
2. Attract 300+ members to the OFH&C
3. Develop five global market initiatives, where Canadian companies win new contracts in new globally competitive markets
4. Transform 50 established Canadian companies through new growth in high-tech ocean opportunities
5. Develop 1,000 new high-value jobs in the Ocean Economy in Pacific Canada
6. Develop 50 new start-ups and scale-ups in the ocean economy in Pacific Canada
7. Support and accelerate 200 start-ups in the ocean economy globally
8. Develop a significant real estate footprint with shared innovation, technology, maker space and testing facilities
9. Develop a significant co-location space, with minimum 100 companies co-locating with the OFH&C
10. Establish strategic partnerships with globally leading networks, ecosystems and hubs to support the internationalization of Canada's ocean economy companies
11. Use the OFH&C to leapfrog leading ocean economy countries and regions around the world
12. Develop a venture fund with $250M assets under management to support the Ocean Tech economy

1.4 CREATING VALUE THROUGH CLUSTER-BASED DEVELOPMENT

Innovation Clusters use evidence based, practical approaches to strengthen innovation and entrepreneurial driven ecosystems by supporting existing and emerging business. They help regions foster economic growth and social progress.

The Ocean Futures Hub and Cluster will create a concerted effort that will accelerate industry innovation and provide necessary infrastructure to create new products, new companies, and new jobs.

OFH&C will bring together entrepreneurs, governments, researchers, industry and private capital to combine innovation capabilities and resources to secure a dynamic growth of Canada's blue economy and prosperity for Pacific Canada.

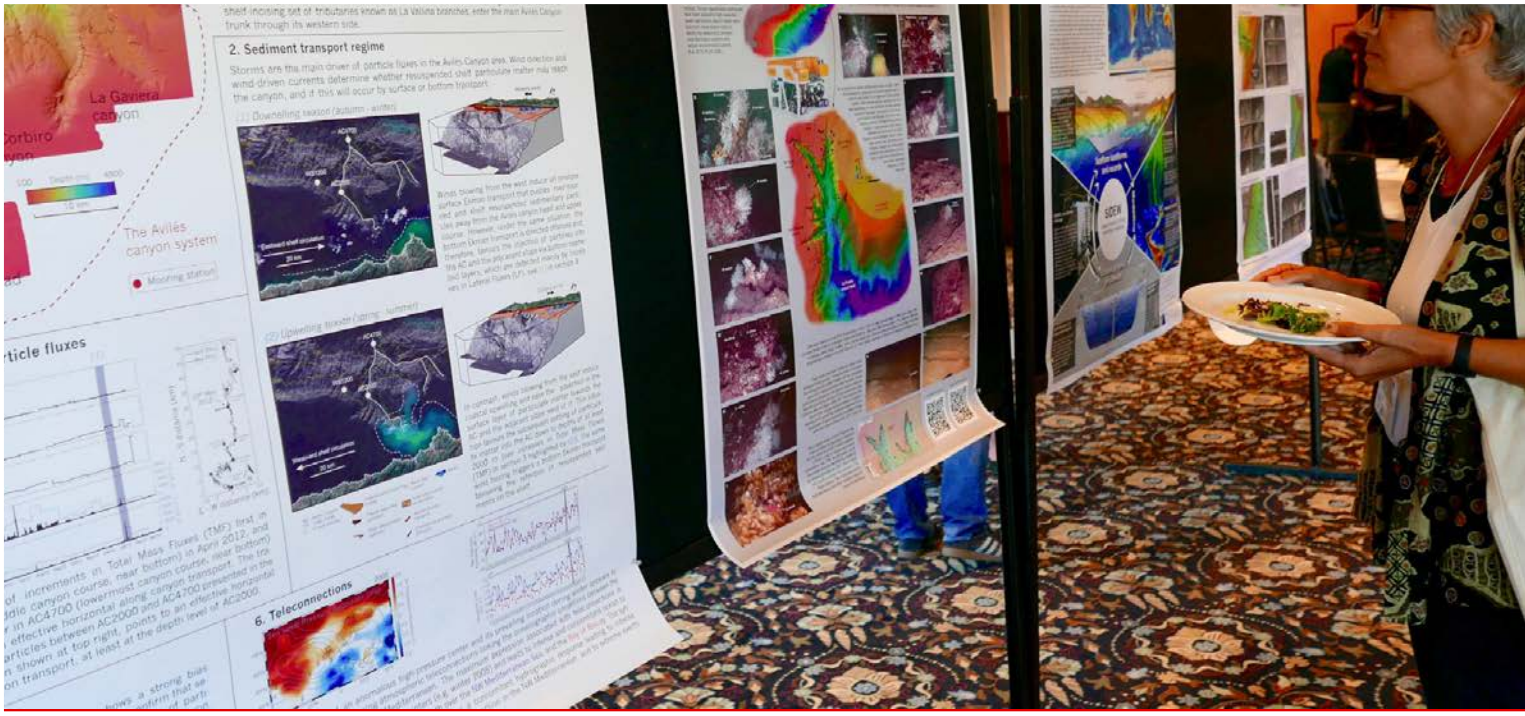
OFH&C will provide an innovation infrastructure for its members that facilitates research, industry-focused education, and new business programs for entrepreneurs., Members will also have access to state-of-the-art facilities for testing, simulation and visualization in order to create faster, more effective innovation and commercialization.

1.5 BUILDING THE OFH&C FOR FIVE STAKEHOLDER GROUPS

In line with modern theories on economic development, innovation clusters and innovative ecosystems, the Ocean Futures Hub and Cluster will create value for all five major stakeholders. The globally-recognized (MIT, Harvard, BI Norwegian Business School, etc.) five stakeholder structure is used in this report to develop the program structure. In our local setting, First Nations are an additional stakeholder group. The OFH&C will include First Nation participation across all five stakeholder groups rather than as a separate category.

Entrepreneur

- Position OFH&C as a powerhouse for entrepreneurship, by attracting capital and supporting entrepreneurship in the ocean industries globally.
- Accelerating entrepreneurship with business growth programs and risk-capital access to rejuvenate new product ideas to boost innovation in ocean industries
- Seek opportunities to ensure meaningful inclusion of First Nations, for example by partnering with existing Indigenous investing groups such as Raven Indigenous Capital Partners to create a focused start-up fund that is culturally sensitive
- Build a long-term culture of entrepreneurship, from early stage to IPO



Capital

- Build out a large-scale ocean investor landscape for all Canadians
- Connecting capital with investment opportunities and increase investors domain expertise on investment opportunities in the growing ocean economy
- Attract more private funding to accelerate innovation and job creation
- Develop a network of 100 ocean angels (business angels)
- Significantly improve value creation in the ocean space for all Canadian investors

Corporate

- Faster adaptation of knowledge and new technology
- Shorten the Time to Market for new innovations by accessing knowledge and infrastructure for testing and validation of new technologies
- Gain access to new growth markets through collaborative export programs
- Build new capabilities and skills in high-tech sectors
- Accelerate innovation through new business models
- Speed up innovation through Corporate Venture Capital (CVC)
- Start working with open innovation, through new partnerships, collaboration projects with start-ups and scale-ups

Government & Public Sector

- Translate government strategies into operational and actionable activities.
- Ensure policy and public support programs than can enhance the region's competitiveness and attractiveness to secure economic growth and jobs.
- Develop better solutions for First Nations participants
- Support industry and job creation through new, innovative formats

Academic & Education

- Collaborate with industry on new R&D programs
- Attract more funding for R & D & I projects
- Develop new, industry-related educational programs (from Bachelor to Executive levels)
- Deliver ocean learning products and engagement with communities
- Work more closely with entrepreneurs and venture capital investors to create more relevant educational programs.


LEFT

2.0 BACKGROUND/RATIONALE

2.1 TRENDS IN OCEAN INNOVATION CLUSTERS AND HUBS

THE HARDWARE AND THE SOFTWARE

Over the past few decades, innovation hubs and innovation parks have been on the rise globally.

Around the world, government, policymakers, and ecosystem builders have been asking themselves how can we compete better? This has led to a massive investment into innovation parks, science parks, innovation districts and co-working spaces. Yet, many have realized that only investing into the buildings, *the hardware*, has failed to produce the expected results.

Over the past decade, this has led to a significant rise in the number of innovation clusters, currently sitting at some 7,000 around the world. These clusters form the backbone, the programs, content, relationships and soft side of these initiatives. We call them *the software*.

Increasingly countries and regions are arriving at the same conclusion, we need both the hardware and the software to compete. We need the co-working spaces, innovation parks and real estate development. But we also need the clusters, programs, shared infrastructure, and joint innovation projects. Together, this is the hardware and software.

The number one trend in global innovation policy is this joint development of both hardware and software. This is also the case for the Ocean Futures Hub and Cluster for the 22nd century, both hardware and software. To compete better.

INNOVATION HUBS IN THE OCEAN ECONOMY

With so many industries and stakeholders that have a vested interested in the Ocean Economy, many regions across the world have created ocean clusters, hubs, incubators and accelerators (see Appendix 2).

Nationally, Canada's Ocean Supercluster is a transformative cluster model that is driving cross-sectoral collaboration, accelerating innovation, and growing Canada's ocean

economy in a way that has never been done before. The Centre for Ocean Ventures & Entrepreneurship (COVE). Located in what was once the Canadian Coast Guard facility on Halifax Harbour, COVE is home to local and global ocean technology businesses, post-secondary institutions, researchers, and marine-based and service businesses that support the ocean sector. The COVE site features extensive marine facilities with two large, deep-water piers, office space, an incubator and space for shops and labs.

Norway has a governmental Cluster program that supports Cluster initiatives. In total, there are more than 12 Cluster initiatives to support the growth of ocean industries. These Clusters do not have any physical infrastructure, but are located in hubs together with industry, R&D, accelerator and incubator programs, and they play an important role as a back-bone organization to foster innovation and cross-pollinate expertise, ideas and resources among members to push Ocean Tech advances to the global market.

The Maritime Alliance (US) has taken the Cluster idea one step further and is helping organize several international maritime and ocean Clusters together. For example, the BlueTech Cluster Alliance was formed in January 2017 and it includes nine different Clusters from seven different countries.

THE BLUE ECONOMY – A $3 TRILLION OPPORTUNITY

The global ocean economy is expected to grow to $3trillion by 2030. For many countries and regions, the blue economy is one of the biggest growth opportunities in the coming decades. Federally, it's recognized that "investing in the Blue Economy will help Canada prosper[1].

Some countries are already capturing significant value from the blue economy. Norway has more than 25% of GDP coming from the ocean economy. The world average is 2.5% of GDP. For Canada, that number is 1.2% of GDP.

This is a massive opportunity for Canada and Canadian companies to rethink the opportunities in the blue economy in the coming decades. With the world's longest coastline, a diverse coastal economy on both east and west coast, a growing demand for new, innovative tech solutions, Canada is perfectly positioned to find and capture value in the blue economy.

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1 https://www.canada.ca/en/privy-council/campaigns/speech-throne/2020/speech-from-the-throne.html

Over the past decade, the term 'blue economy' has grown into a global call for sustainable economic development in the ocean space. A common definition is:

"Sustainable use of ocean resources for economic growth, improved livelihood and jobs, and ocean ecosystem health".

The blue economy encompasses all economic activities related to the oceans, including both established and emerging sector. This allows for the important role of tech transfer or knowledge transfer, using legacy capabilities to build new future growth industries in the ocean space. Examples of established industries include ship building, security, oil & gas and marine tourism. Emerging sectors often include ocean robotics, autonomous ships, offshore wind energy and marine biotechnology.

Countries and regions around the world are racing to position themselves within the prime emerging sectors. National ocean strategies, innovation clusters, venture funds, national R&D programs are all tools being used by visionary governments and industry leaders to compete and win in the global blue economy of the future.

For Pacific Canada, the time is now to organize, collaborate and lead the development of new high growth sectors in the global blue economy.

IMPACT INVESTING & BLUE FINANCE

Another global trend that has moved quickly over the last decade has been the development of impact investing. Impact investing is defined by the Global Impact Investing Network (GIIN) as investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return.

Impact investing has progressed steadily from a fringe specialty to niche, alternative and now a mainstream investment class. Over a decade ago they appeared mostly as negative-screen mutual funds that appealed to retail investors by pledging not to invest in specified types of companies such as those that dealt in alcohol, firearms or tobacco. This has now grown to a global scale that GIIN estimates at USD $715 billion as of the end of 2019 and has all types of investments including a massive social venture capital sector.

Green economy focused investing is now well established, and the latest trend within the impact investing space is known as "blue finance". Blue Finance funds (Katapult Ocean, SeaAhead, Aqua-Spark etc.) focusing on investment opportunities in sustainable ocean companies have emerged in the last few years and grown explosively.

BC'S EMERGING ECONOMY IS CLEANER AND MORE INNOVATIVE

Prior to COVID-19, the Emerging Economy Taskforce began compiling its final report, which was released in March 2020. The report explores future opportunities and challenges for British Columbia. They found that British Columbia's economy is influenced by changing global trends, emerging technological advancements, changing business processes, climate change and a variety of other factors. In the report, they outline five strategic goals which the OFH&C supports.

1. **Embracing Technology and Innovation** – OFH&C will build on the strengths in the ocean and marine technology sector and foster further investment in innovation.

2. **Leveraging B.C.'s Green Economy** – OFH&C supports the emerging blue economy, which similar to the Green Economy and circular economy, is low-carbon, resource efficient and socially inclusive, as it presents high-value opportunities.

3. **Building a Highly Skilled and Adaptable Workforce** - OFH&C will help ensure B.C. continues to attract, develop and retain a highly skilled workforce within the rapidly growing ocean economy.

4. **Ensuring an Effective Enabling Ecosystem** – OFH&C also recognizes that an enabling ecosystem for B.C.'s economy, which allows for the efficient flow of products, people, technology and ideas within the province and with the rest of the world, is essential.

5. **Demonstrating Public Sector Leadership** – "Given the accelerated pace of change, flexible solutions must go hand-in-hand with a new level of public sector responsiveness."[2] OFH&C will help communicate to government and public sector agencies how they best stimulate innovation and mitigate risks in Pacific Canada's blue economy.

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2 https://www2.gov.bc.ca/assets/gov/employment-business-and-economic-development/economic-development/emerging-economy-task-force/eetf-final_report-20200511-final.pdf (page 10)

In addition to B.C.'s Emerging Economy Taskforce, the OFH&C also aligns with CleanBC and InnovateBC. CleanBC is a guide to a more prosperous, balanced and sustainable future. The plan states that "rising to meet the global challenges of climate change is an opportunity for British Columbia to mobilize our skilled workers, natural resources and boom technology sector to reduce climate pollution and create good jobs and economic opportunities across B.C.[3].

In turn, InnovateBC is a Crown Agency that represents the government of British Columbia and the people who make up B.C.'s innovation ecosystem. Their role includes funding, supporting and building connections for innovators. Two priorities of InnovateBC that were outlined in their 2020-21 mandate letter was advancing reconciliation with Indigenous Peoples and moving towards a low-carbon economy[4].

OFH&C will be a catalyst for a cleaner, more innovative B.C.

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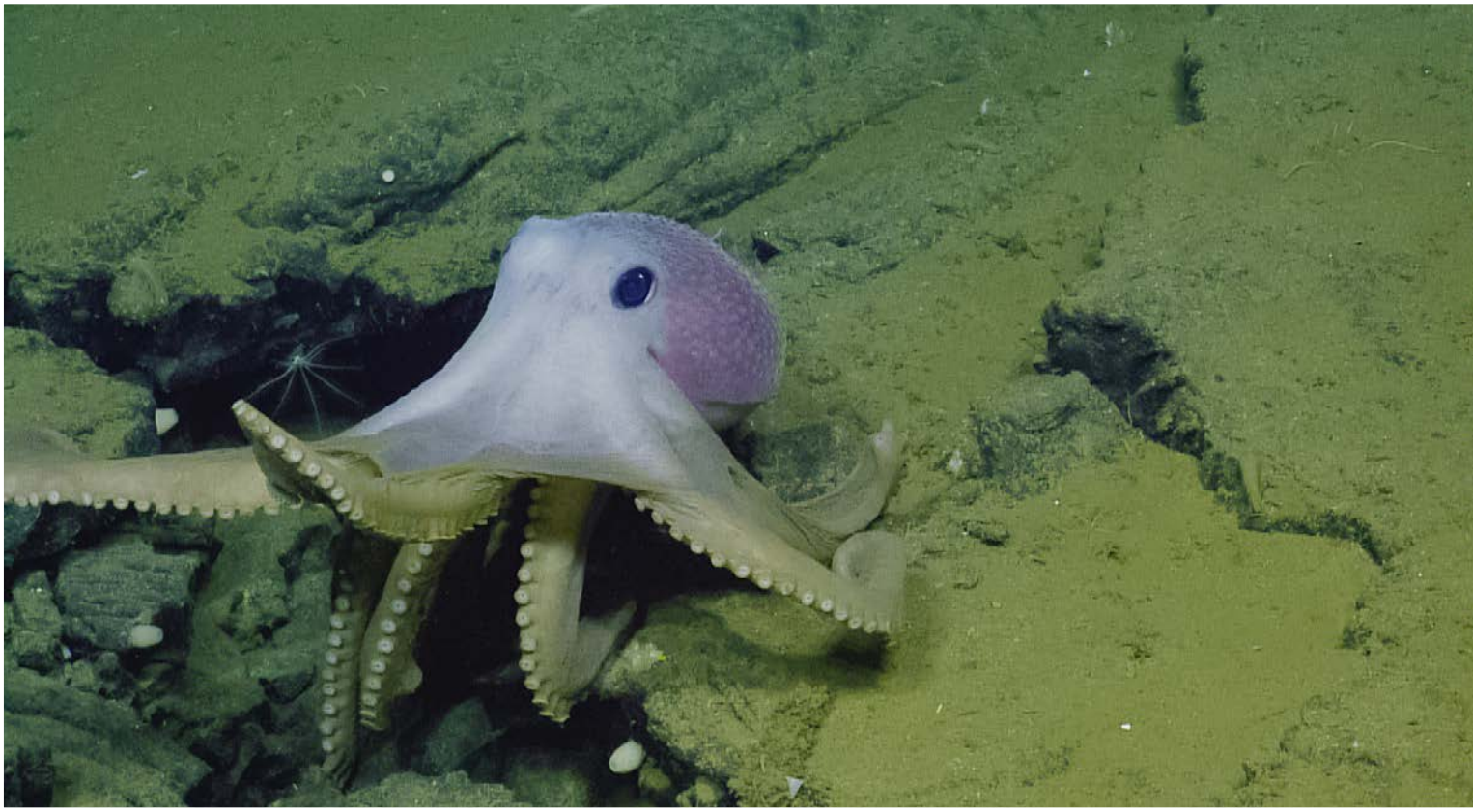
3 https://blog.gov.bc.ca/app/uploads/sites/436/2019/02/CleanBC_Highlights_Report_Updated_Mar2019.pdf

4 https://innovatebc.ca/wp-content/uploads/2020/03/2020-21-Mandate-Letter.pdf



COVID-19 RECOVERY AND THE SOUTH ISLAND REBOOT

As the COVID-19 pandemic continues to unfold across the globe, the need to foster resilient economies throughout Canada has become evident. Distressed national and global markets have caused unprecedented interruptions to trade, employment, and economic activity. Locally, unemployment has risen above 10% in Greater Victoria.

In response, a Rising Economy Taskforce was launched on April 16, 2020, one month after the BC Government first declared a state of emergency caused by the COVID-19 outbreak. In their economic recovery plan "Reboot," the Taskforce identifies ten recovery pillars, one of which calls for investment into innovation ecosystems[5]:

> **"To keep up with global economic trends, respond to disruptions, like COVID-19 or climate change, and create new products and jobs, we need to strengthen our innovation ecosystem. Innovation ecosystems that are supported by industry, government and academia sustainably grow local businesses, foster research and development, attract new businesses, capital and talent, as well as support commercialization, entrepreneurship and exports." – (Reboot, p. 18)**

OFH&C is a keystone initiative that directly supports investment into innovation ecosystems, recovery from COVID-19 and long-term resilience through new technology, companies and jobs.

5 https://southislandprosperity.ca/wp-content/uploads/2020/11/Reboot_Greater-Victorias-Economic-Recovery-Plan-2020-2022_SIPP-FINAL.pdf

VICTORIA 3.0 – RECOVERY, REINVENTION, RESILIENCE

Victoria 3.0 is an economic action plan that accompanies the City's Official Community Plan to 2041. It's a long-term plan and vision for a sustainable, influential city that will build a strong innovation ecosystem and create a strong and resilient economy now and for the future. The actions laid out in Victoria 3.0 will build an economy that enables everyone to flourish and that will set Victoria on a path to low-carbon prosperity.

Victoria 3.0 has three main goals. The first and immediate focus is on supporting businesses to adapt to a new normal and become more resilient in light of experiences and lessons learned during the COVID-19 pandemic. The second goal is to create a city and an economy for everyone. Finally, the third goal is that while Victoria builds its economy over the next two decades, it is done within the boundaries of the Earth's capacity to sustain us.

The plan also complements the South Island Prosperity Partnership's Rising Economy Taskforce by situating itself within their important work to reboot the regional economy.

Two of the cornerstone initiatives of Victoria 3.0 are the Ocean Futures Innovation Hub as well as an Arts and Innovation District.

The Arts and Innovation District, which will host the Ocean Futures Hub and Cluster, includes waterfront properties and is a place for cross-sector collaboration. It too shares the vision of being a place where ideas are turned into products and services and where new high-value, future-oriented jobs are combined with a global-facing, export-oriented mindset. In short, the Arts and Innovation District will be a neighbourhood of future-oriented, globally-fluent leaders and organizations, such as the OFH&C, collaborating to solve problems as society progresses to the 22nd-century.

INFRASTRUCTURE AND SPACE REQUIREMENTS

The key themes provided by stakeholders regarding infrastructure and space were:

1. Clear need for water access on-site.
2. Strong support for providing shared and collaborative spaces including, event and auditorium space, co-working and meeting space, research and development kitchens, testing facilities, and other light industrial areas.
3. Strong support for shared resources such as a mobile crane, storage lockers or containers, testing equipment, boat launches, internet and IT, and vehicle parking.
4. Emphasis on the need to leverage connections with industry leaders, institutions, and government, with the possibility of co-locating these partners at OFH&C to improve communication and collaboration.
5. Provide spaces that allow for enterprises to grow on-site.
6. Explore options to utilize an existing building or infrastructure to reduce costs.
7. Providing services on-site including administration, event coordination, and networking.
8. Learn from existing models like COVE, both the positive and negative aspects.

More specifically, the survey and interviews highlighted the need for at least 3,275 square meters of office space (private and co-working), light industrial workshop space, warehousing and foreshore area over the next three years as potential tenants relocate. In addition to 3,275 square meters of floor space, the following equipment is also needed:

- Pressurized test tank and 2-small water test tanks
- Laboratory space for biology-based and chemistry-based activities
- Community Observatory used to mount sensors and relay data
- Barge with a winch and internet access to submerge and test products
- Boat access for small/medium-size boats
- Boardrooms with abilities to live stream (in and out) with digital screens

3.0 PROGRAM OFFERINGS

3.1 ALIGNING PROGRAMS TO ENGAGEMENT FINDINGS

In designing what programs should be offered to participants in an innovation hub, there are hundreds of options to choose from. In the short term, the OFH&C should start with the programs that are most aligned to what the interested participants feel would be of greatest interest to helping them grow their organizations. Once established and some momentum is achieved, programs can be expanded in scope and scale and new programs can be added to attract international players to move or establish an office at the OFH&C. The prioritization of programs originated from the extensive stakeholder engagement process described in the previous section and informed by the experiences of the start-up of other innovation hubs.

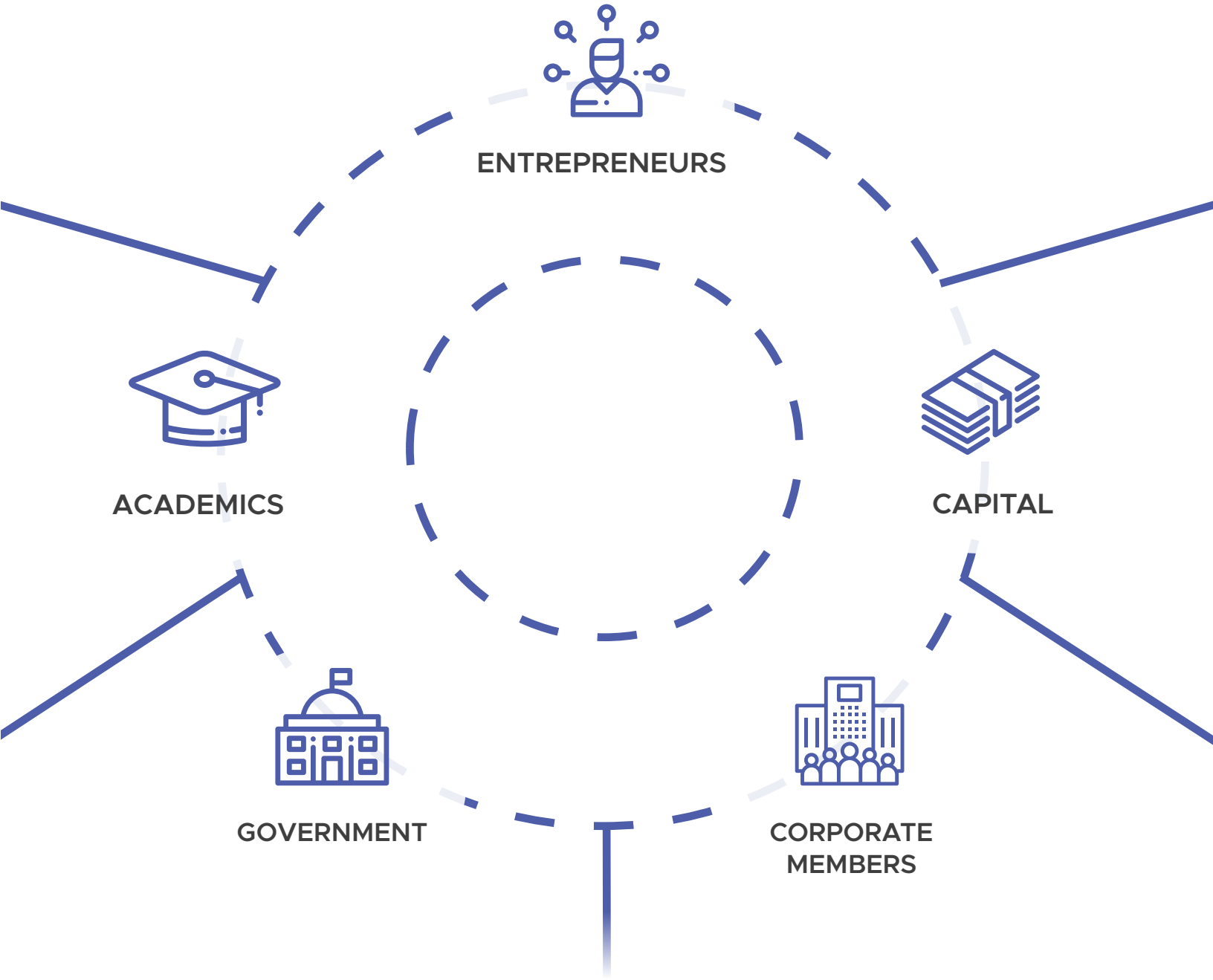
As part of the engagement process, interested future OFH&C participants were asked in the survey to rank the ten programs identified in an earlier stage based on how interesting they were to their organization. There was high variation between respondents' answers with no clear consensus on a single program ranking. However, the weighted average rank of each program is shown below, in order from most interesting (1) to least interesting (10).

1. Shared access to academic research based on common challenges (3.8 / 10)
2. Business development work in international or outside of BC markets (4.1 / 10)
3. Shared advocacy with senior government (4.5 / 10)
4. Liaison with First Nations (4.6 / 10)
5. Specialized training and recruitment programs to attract and retain talent (5.4 / 10)
6. Improved access to capital (public and private) (5.4 / 10)
7. Research into and management of joint submissions to RFPs (5.5 / 10)
8. Shared marketing and public relations to raise industry profiles (5.6 / 10)
9. Identify and connect with specialized testing facilities outside of the region (7.3 / 10)
10. Access to early supply chain support (8.3 / 10)

Taken together with stakeholder interviews and the design workshops, it is possible to work towards some clear direction on the most relevant programming to stakeholders.

3.2 FIVE STAKEHOLDER FRAMEWORK

In assessing the program needs of various stakeholders, we have applied the five-stakeholder framework. This allows us to group the stakeholders by this typology to see where common threads were appearing. The five types in this framework are:



The five pillars of an Innovation Cluster (based on research from MIT, Harvard, BI Norwegian Business School, Engage // Innovate)

The full stakeholder list was created by the South Island Prosperity Partnership's working group for the OFH&C. They went very broad on invitations to participate and those that responded were across all the five types. Established medium and large marine economy companies based in (or with significant existing presence in) this region represent the strong majority of those that have expressed interest in participating and who helped develop the needs assessments. In mapping out the needs, one dominant message and five sectors have emerged. Collaboration came through during all the steps in the engagement work as a key message. Beyond that, we find five topics:

- Corporate transformation (large-scale business reinvention)
- Corporate innovation – and a need to work with smaller skunkworks, fast-paced start-ups
- Shares testing facilities
- Shared offices, co-location and community building
- Start-up & Scale Up Programs

INDUSTRY-LED STRATEGIC INITIATIVES
To drive economic development

The following five strategic focus areas were identified as the top priorities and will be the foundation of the strategy for the Hub starting in 2021.

INDUSTRY TRANSFORMATION

How do we accelerate the transformation of our currently largest and most important ocean-based companies?

MARKET DEVELOPMENT (INTERNATIONAL)

How do we collaborate to unlock new market opportunities in the global ocean economy?

SHARED INNOVATION INFRASTRUCTURE

How do we collaborate to develop new, world-class testing and development facilities, open to companies, R&D and educational providers alike?

ENTREPRENEURSHIP

How do we better support and development our current startups, while also building the infrastructure for the next 500 ocean-based startups in Pacific Canada?

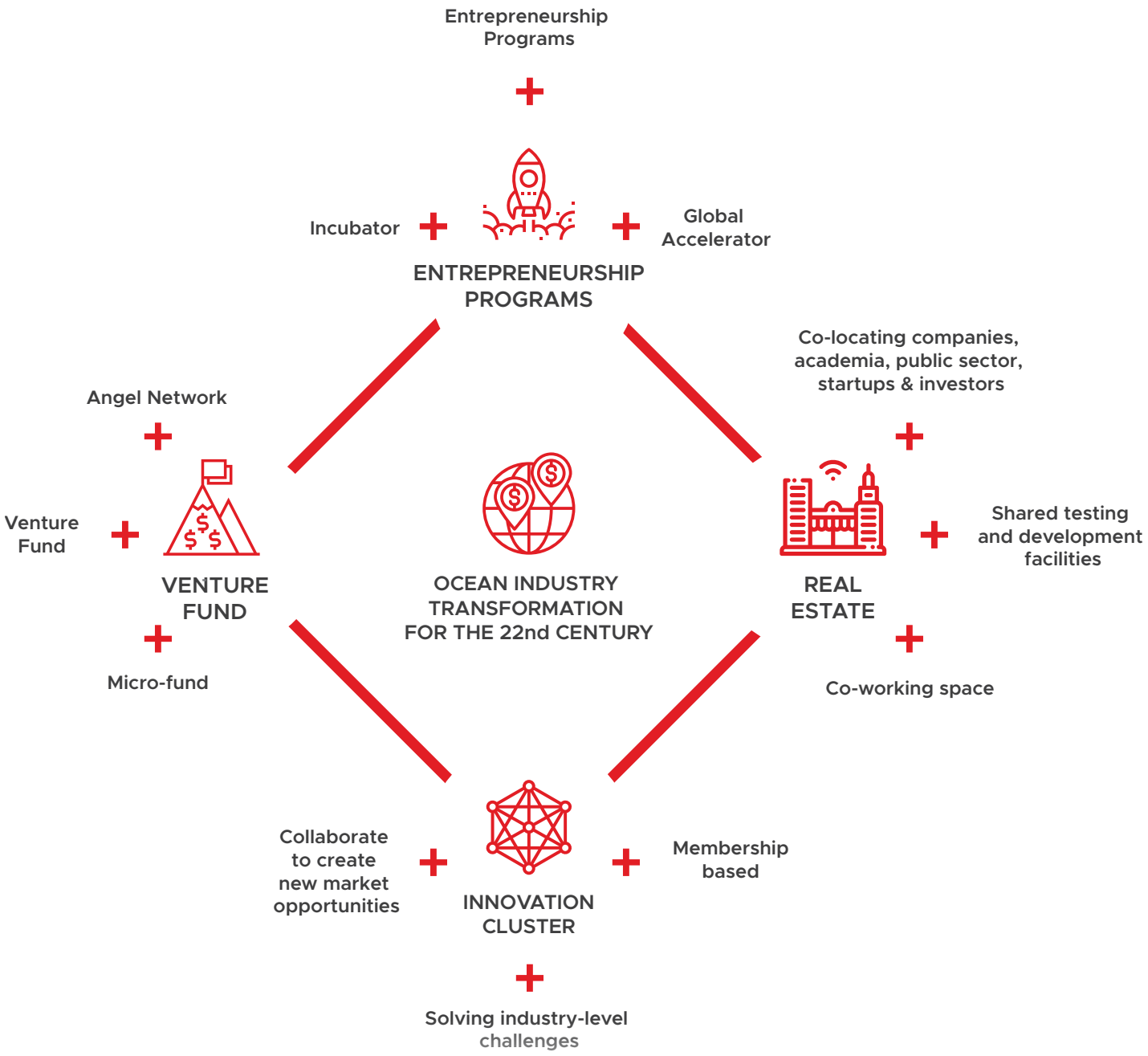
CAPITAL

How do we attract and secure private venture capital financing into the future ocean economy, from business angels, local investors and global ocean-focussed venture funds like Hatch & Katapult Ocean?

3.3 RECOMMENDED PROGRAMS

Over the following pages we have listed the recommended programs we believe should be developed in the Ocean Futures Hub and Cluster. Taking into consideration the Five Stakeholder Framework and the needs assessments of stakeholders that want to be a part of founding the OFH&C, we have grouped them into four distinct and logical pillars that can have clear goals and can grow into distinctly managed or separately funded programs. Each of these programs is broken down into others that would be managed within those groupings. All of them are designed to be rapidly started and capable of scaling up quickly to lead to transformation of the ocean industry for the 22nd century. These are ambitious programs. But, if delivered, they are guaranteed to have a significant impact on OFH&C, both regionally and globally. Due to space considerations in this business case document, the programs are described in short outlines in a table format. We recommend continuing the development of these programs once the OFH&C is established.

CORE PROGRAM AREAS
+ INITIAL PROGRAM OFFERINGS



CORPORATE TRANSFORMATION PROGRAMS

Need	Corporate Transformation	Detailed overview
Program Initiative #1	Cluster innovation project 1 : Corporate Transformation	Company development program on corporate transformation.
Program Initiative #2	Cluster innovation project 2 : Executive MBA Program - Corporate Transformation in the Ocean Industry	Collaborate with B.C. based business school. Establish a part-time, Executive MBA Program on Corporate Transformation in the Ocean Industry. Look to NHH Norway collaborations with NCE Seafood and NCE Finance Innovation Clusters.
Program Initiative #3	Cluster innovation project 3: Global market mapping	Collaborate with all members to develop a global market map of the opportunities for Canada's Ocean Industries. Look to global market. Extensive work should go into communication and awareness building post-publication.
Program Initiative #4	Cluster innovation project 4: Assessing your transformational capability	Advanced level program on assessing members' transformation capabilities. Followed up with executive conversation. Connects with CEO Forum.
Program Initiative #5	Cluster innovation project 5: R&D for future technologies	Collaborate with members, universities and future thinkers. Develop a tech roadmap of future technologies and how they might impact Canada's ocean industries.

CORPORATE INNOVATION PROGRAMS

Need	Corporate Innovation	Detailed overview
Program Initiative #1	Global Growth 1: new market	Establish a cluster-led program format for Global Growth: a shared market entry- and development program. Aim for 15 – 20 members into each program. Select a market/ segment (i.e. floating wind, Japan). Run program #1.
Program Initiative #2	Global Growth 2: new market	Run program #2
Program Initiative #3	Global Growth 3: new market	Run program #3
Program Initiative #4	Global Growth 4: new market	Run program #4
Program Initiative #5	Global Growth 5: new market	Run program #5
Program Initiative #6	Innovation Challenge Jam: Bring your challenge to the world	Cluster wide innovation challenge program. Map and activate around challenges. Collaborate to solve. Awards and prizes.
Program Initiative #7	Accelerator 4: Ocean Opportunities (corporate Accelerator)	Establish a corporate accelerator program for ocean economy. Follow global standard formats. 5-day Bootcamp (X2 Corporate Accelerator) or Techstars global programs
Program Initiative #8	Partner with Accelerator 5: GOT – Global Ocean Tech	Activate corporate members to partner closely with the GOT – Global Ocean Tech Accelerator in Victoria

SHARED TEST FACILITY PROGRAMS

Need	Shared test facilities	Detailed overview
Program Initiative #1	Develop Shared test facility #1	Establish shared test facilities
Program Initiative #2	Develop Shared test facility #2	Establish shared test facilities
Program Initiative #3	Develop Shared test facility #3	Establish shared test facilities
Program Initiative #4	Develop Shared test facility #4	Establish shared test facilities
Program Initiative #5	Develop Shared test facility #5	Establish shared test facilities

CO-LOCATION AND CO-WORKING PROGRAMS

Need	Co-location, co-working, community building	Detailed overview
Program Initiative #1	Establish co-working	Set up co-working. Establish legal structure. Formal contract. Brand. Communications and business development functions..
Program Initiative #2	Start co-locating companies	Secure and sign tenants. Build out community. Expand services.
Program Initiative #3	Host events, meet ups, conferences to build community	Host a wide range of small events, meetups, programs and conferences. Build cross-collaboration, meetings and avenues to connect.
Program Initiative #4	Build out real estate masterplan	Have a small team work with key stakeholders, partners, members, local government and real estate developers to develop a 30-year masterplan for the area.
Program Initiative #5	Work to support the long-term building and development of the larger real estate foot print	Develop an active plan to support the long-term development of the larger real estate side of the project.

SHARED TEST FACILITY PROGRAMS

Need	Start-up & Scale Up Programs	Detailed Overview
Program Initiative #1	Incubator (low touch)	Set up the incubator. Aim for a very low touch, entry point. Aim to get companies to co-locate. Offer very basic services. Most incubators offer office space, co-working and basic training programs.
Program Initiative #2	Start-up short programs: - Ocean Industries - Lean Start-up - Business Models - Investor Readiness - Start-up Boards - Start-up CFO - Securing your first ocean customer - Raising global growth capital	Develop a wide range of short programs for entrepreneurs. These should be a mix of online and offline delivery. Suggested programs include: Ocean Industries – an introduction to the market opportunities and future market & tech trends. Lean Start-up – entry-level program to lean start-up development. Business models – entry-level program to business model design. Investor readiness – 1-3 month program to get your company ready for first or second round of investment. Can follow Katapult Ocean's Model of 100% digital delivery. Start-up Boards – How to assemble and develop a start-up board. Start-up CFO – how to handle the role of the start-up CFO. Securing your first customer – sales training in the ocean industries. Raising global growth capital – 3 month program to raise you're A- or B- Series.
Program Initiative #3	Ocean Angels Network	Develop a regional angel network for the ocean industry. Should be done in very close collaboration with Victoria's. Capital Investment Network and Vantec angel network. Aim to build global angels into the network. Create the tech platform for the angel community.
Program Initiative #4	Accelerator 1: The Ocean Accelerator. (Entry level)	Develop a standard 3-month accelerator program. Aim for entry-level, open to all Canadian firms. Target standard $100.000 at 7% equity. Build a local delivery team, with global partner network. Can also be done in partnership with Hatch, Katapult Oceanor any other accelerator program.
Program Initiative #5	Accelerator 2: Build your Ocean Start-up (Company Builder Program)	Develop a pre-company, venture building program. Often called 'Hyper-accelerator'. Target 'solving ocean industry challenges'. Aim for 15 – 30 participants. Consider following the Norwegian X2 Labs Start-up Lab model, for 4 week + 12 month program design. Target $100.000 investment per company.
Program Initiative #6	Accelerator 3:Fast-track to IPO: Ocean Tech (for later stage)	Develop an advanced stage (late stage) mini-accelerator to help fast-track to IPO. This growth-stage program should have 4 – 10 companies, part-time over 1-6 months. May take equity or participant fee. Bring in outside venture experts.
Program Initiative #7	Accelerator 4: Ocean Opportunities (corporate Accelerator)	Establish a corporate accelerator program for ocean economy. Follow global standard formats. 5-day Bootcamp (X2 Corporate Accelerator) or Techstars global programs
Program Initiative #8	Accelerator 5: Global Ocean Tech (Global ocean start-ups)	Longer-term, develop a highly competitive accelerator with a stated ambition to bring the very best global ocean tech start-ups to Victoria. Develop specific ocean verticials. Connect with global players in the ocean economy. Build a world-class team. Requires Fund #1 to run, ideally also Fund #2


WORK VEST

4.0 FIRST NATIONS

We acknowledge that the South Island region is within the unceded territories of the Coast Salish peoples whose relationship to the land and water has existed for millennia. The Ocean Futures Hub and Cluster's proposed location is in the Lekwungen territory, also known as the Songhees and Esquimalt First Nations communities.

In 2005, the B.C. government and the First Nations Leadership Council entered an era of reconciliation based on recognition of rights, respect, co-operation, and partnership. Furthermore, in November 2019, the Province of B.C. adopted the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) into legislation. "BC is the first province to commit to aligning its laws with UNDRIP. This legislation is the first steps towards the meaningful implementation of UNDRIP[7] ". Provided that the OFH&C is situated in the traditional territories of Songhees and Esquimalt First Nations, and that its members will ultimately work throughout many other traditional territories and with many Indigenous communities, reconciliation is also important to the Ocean Futures Hub and Cluster.

The OFH&C will endeavour to collaborate with Coast Salish First Nations, among other First Nation communities, as stewards of the land and desired partners in improving Pacific Canada's economies and ecologies.. T'sou-ke Nation is one of the first Indigenous communities that have expressed interest in partnering with OFH&C by providing a letter of support (See Appendix 4).

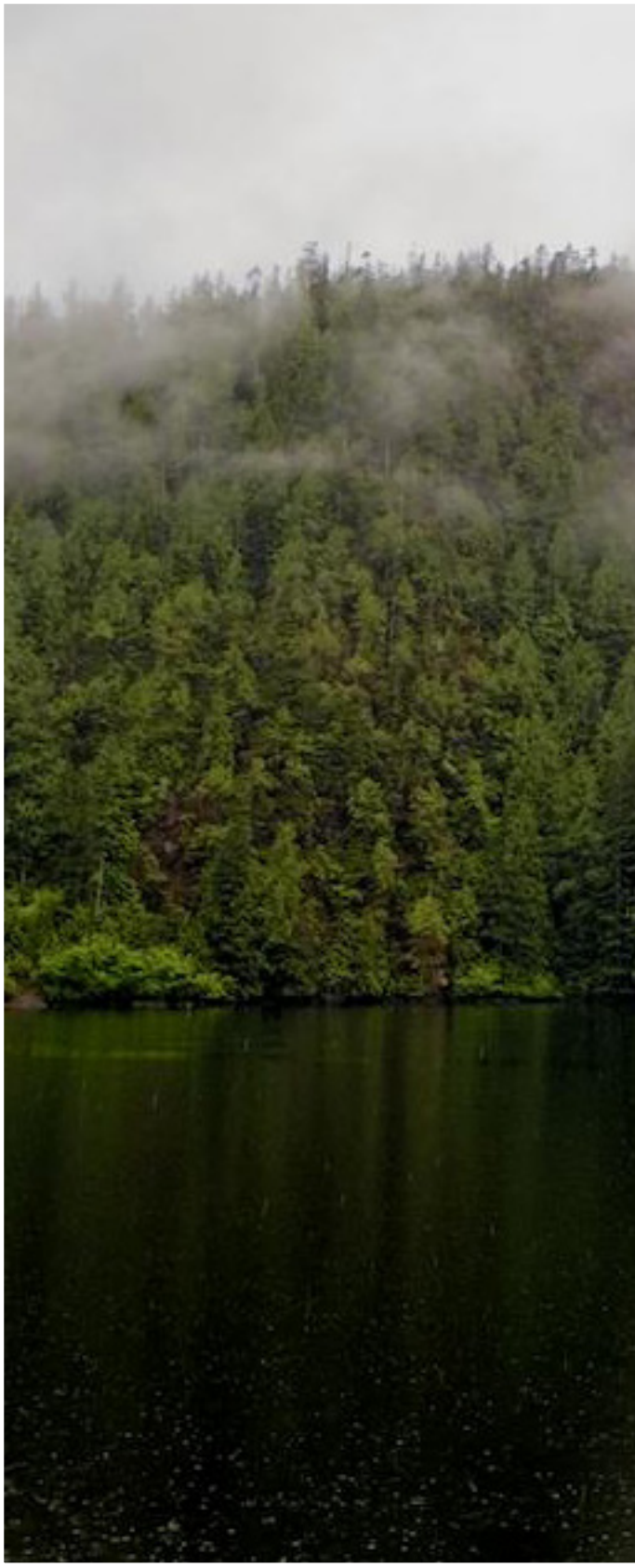
7 https://tkemlups.ca/province-of-bc-adopts-undrip/#:~:text=On%20November%2026th%20the,the%20meaningful%20implementation%20of%20UNDRIP.

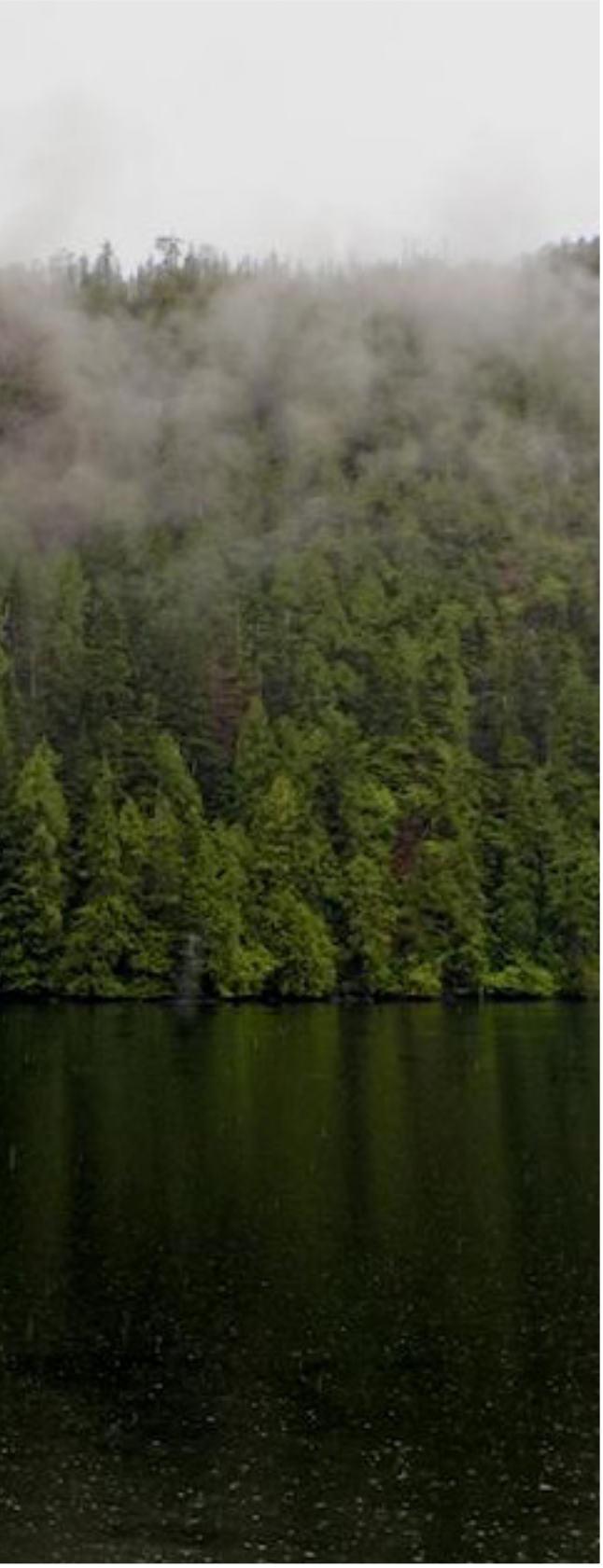
T'Sou-ke Centre for Sustainability and Innovation at Chee-a-nun (Muir Creek) will serve as a center of scientific research embedded in the environment and traditional cultural practices of the T'Sou-ke Nation. It will be a place where both indigenous and non-indigenous scientists and knowledge holders can develop, share and deepen an intimate understanding of the natural processes and human impacts on the marine ecosystem. It will also serve as a test and evaluation site and proving ground for marine innovation. (see Appendix 4)

During the stakeholder interviews, numerous participants stated that they are directly or indirectly engaged with Indigenous communities. First Nations are often involved as partners with ports, especially around expansion of port activity and climate change, and many have created sophisticated Economic Development Corporations to facilitate conversations with organizations like the OFH&C.

They also serve as clients, as well as business and research partners. Marine Labs, Ocean Networks Canada, ASL Environmental Sciences, Cascadia Seaweed and other OFH&C participants have substantial working relations with Indigenous communities and already maintain relationships with dozens of communities on all three of Canada's coasts; with specific note to Tsleil-Waututh Nation and
T'sou-ke Nation.

The Ocean Futures Hub and Cluster can play two important roles in reconciliation. First, OFH&C can celebrate the ongoing collaborations of its members with Indigenous communities throughout Canada. Second, it can help cultivate Indigenous talent, with several interviewees seeing potential in cultivating Indigenous talent in the region and a growing desire to hire Indigenous community members in their industries. OFH&C can utilize existing apprenticeship and career development initiatives, such as ACCESS (Aboriginal Community Career Employment Services Society), CSETS (Coast Salish – Employment and Training Society) and the Victoria Native Friendship Centre's CEER (Career, Employment and Education





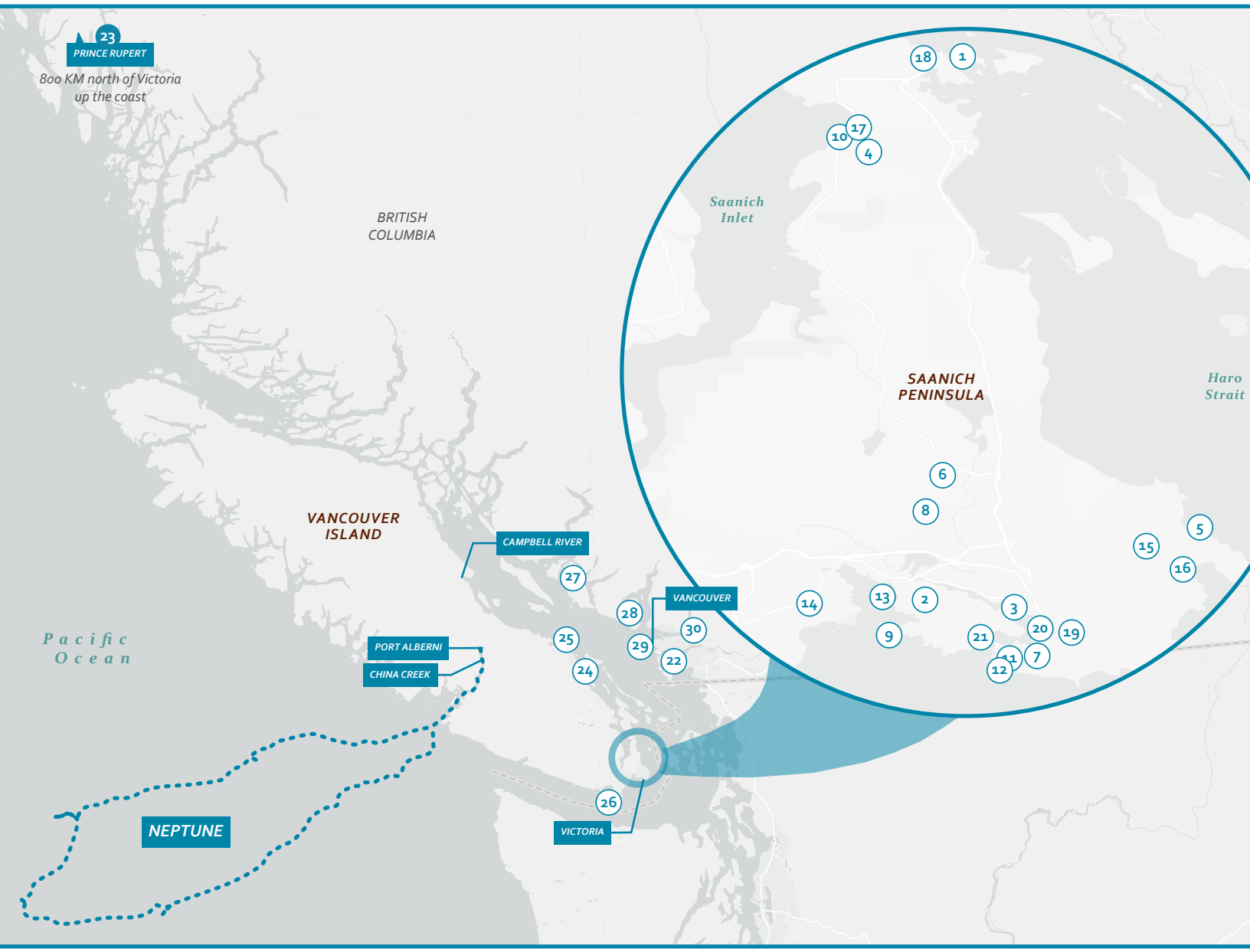
Resources) to help develop and connect talented Indigenous people to OFH&C members who need skilled workers. Ongoing relationships can also identify talent gaps in the blue economy which ACCESS, CSETS and CEER can help fill with Indigenous talent.

One OFH&C participant is already actively involved with ACCESS and has invested over $3million into the program. ACCESS serves to enhance human resource development and the sustainable capacity of the urban Indigenous population in Greater Vancouver through the provision of employment and training services, and something similar can be down in Greater Victoria.

Working with First Nations will require forming equal partnerships built on shared values, respect and mutual benefits, and relationships where Indigenous communities in the region can share in the success of the OFH&C initiative (i.e. data, profits, talent development, and more). Once established, the OFH&C will work with local First Nations communities to establish a memorandum of understanding as a basis for initiating future partnerships and consultation procedures. The OFH&C will also seek to continuously engage local First Nations in opportunities to collaborate in the development of the region's ocean economy and the creation of new employment opportunities for indigenous people. Additionally, as landowners (under Matullia Holdings) in the proposed City of Victoria Arts and Innovation District, it is also proposed that the OFH&C will also work with First Nations landowners on future real estate and development opportunities in the area.

5.0 HUB AND SPOKE MODEL

OCEAN FUTURES HUB AND CLUSTER INNOVATION NETWORK



1. Quadrant Marine Institute
2. Esquimalt Graving Dock
3. Point Hope Shipyards
4. ROPOS (Canadian Scientific Submersible Facility)
5. Ocean Networks Canada
6. Vancouver Island Technology Park
7. Belleville Terminal (International Ferries)
8. Camosun College - Interurban Campus
9. Royal Canadian Navy - Maritime Forces Pacific (CFB Esquimalt)
10. North Pacific Marine Science Organization (PICES)
11. Greater Victoria Harbour Authority
12. Ogden Point (Deep Water Port)
13. Camosun Coastal Centre (Marine Training)
14. Royal Roads University
15. University of Victoria
16. University of Victoria - Coast Capital Savings Innovation Centre
17. Canada Institute of Ocean Sciences
18. Swartz Bay Ferry Terminal (BC Ferries)
19. Alacrity Canada (Clean Tech)
20. VIATEC Accelerator Program
21. Canadian Coast Guard Western Region
22. Port of Vancouver
23. Port of Prince Rupert *(OFF MAP)*
24. Port of Nanaimo
25. Pacific Biological Station
26. T'sou-ke First Nation
27. Pender Harbour Ocean Discovery Station (PODS)
28. Nicholas Sonntag Marine Education Centre
29. University of British Columbia
30. Simon Fraser University

6.0 IMPLEMENTATION ROADMAPS AND BUDGET

SIX MONTH ROADMAP

JAN 8TH	JAN	FEB
Establish interim start-up board Cluster Board Strategy session: Governance, structure, financing, communications,	Secure Cluster CEO	Develop 2021 – 2023 strategy, timeline, activities, financing, organization, member recruiting, communications channel
Set up Entrepreneurship programs – align with cluster strategy		Launch first entreprenurship short programs
	Set up co-working solution	

MARCH	APRIL	MAY	JUNE
Cluster & cluster organization fully operational. First 30 members recruited			First 60 members recruited
Recruit for investor lead			15 start-ups recruited
Develop early plans for co-locating	Co-working fully operational		15 Co-working customers signed
Incubator fully operational 10 start-ups recruited	Launch Angel Network		

THREE YEAR ROADMAP

	BUILDING THE FOUNDATION (I) 2021 - 2023	SCALING THE HUB AND CLUSTER (II) 2024 - 2029	GLOBAL POSITION AND IMPACT (III) 2029 +
	• Establish angel network • Set up micro-fund • Raise $5M	• Develop international co-investors • Set up second fund • Raise $50-$250M	• Expect first batch to IPO or exit • Focus on value creation • Return first fund to LP's
	• Establish Co-working space • Establish one test facility • Co-locate 40 organizations	• Co-working space: 40 companies • Establish four test facilities • Co-locate 80 organizations	• Co-working space: 50 companies • Establish five test facilities • Co-locate 100 organizations
	• Establish Incubator • Establish 2 accelerator programs • Establish micro-fund & angel network	• Incubator: 140 firms (lifetime) • Accelerator programs: 4 • Two funds, angel network	• Incubator: 200 firms (lifetime) • Accelerator programs: 5 • $250M assets under management, Angel network: 100 members
	• Legal organization • Operating organization • Secure funding • Attract members • Deliver on first projects	• Scale operations • Expand team • Secure larger financing • Grow international network • Deliver high-impact programs	• Strong organization in place • International position well-established • Attracting global players to Canada • A magnet in the global ocean economy • Documenting economic impact & job creation

6.1 PERFORMANCE EVALUATION METRICS

To assess the OFH&C Performance, we work on two principles.

A. 2030 and 2023 timeline

B. Assess performance on each of the four strategic pillars

Using these principles, we have developed a scorecard containing a total of 12 scorecard items, split over nine categories. This scorecard will also help the incoming board and management team to select their priorities against. available resources, staff and funding

THE AMBITION

By 2030 we will:

1. Establish OFH&C as one of the top ten global ocean technology clusters globally
2. Attract 300+ members to the OFH&C
3. Develop five global market initiatives, where Canadian companies win new contracts in new globally competitive markets
4. Transform 50 established Canadian companies through new growth in high-tech ocean opportunities
5. Develop 1000 new high-value jobs in the Ocean Economy in Pacific Canada
6. Develop 50 new start-ups and scale-ups in the ocean economy in Pacific Canada
7. Support and accelerate 200 start-ups in the ocean economy globally
8. Develop a significant real estate footprint, with shared innovation, technology, maker space and testing facilities
9. Develop a significant co-location space, with minimum 100 companies co-locating with the OFH&C
10. Establish strategic partnerships with globally leading networks, ecosystems and hubs to support the internationalization of Canada's ocean economy companies
11. Use the OFH&C to leapfrog leading ocean economy countries and regions around the world
12. Develop a venture fund with $250M assets under management to support the Ocean Tech economy

These goals are indeed ambitious, but not unprecedented. There is a very conducive macro environment with rapid growth in the blue economy, an existing base of successful and growing local companies, and a shift towards investing in Blue Finance. Looking at the scope of what COVE and Katapult Ocean achieved in their first two to three years and MarineHolm has achieved in a decade, these ambitious goals become much more realistic.

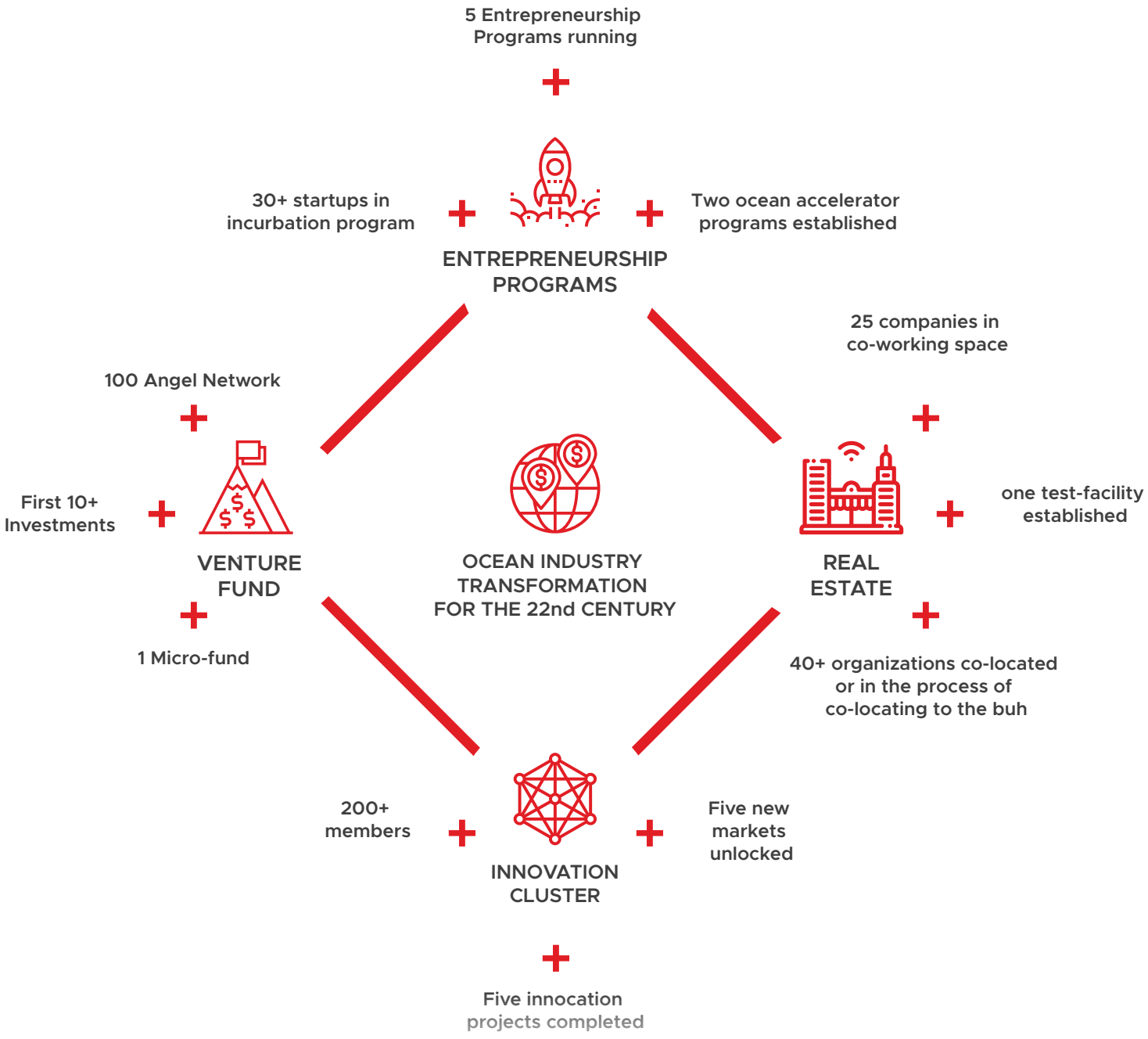
THE 2030 SCORECARD

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2030 Target state
INNOVATION CLUSTER											
Members recruited (# firms)	100	150	200	250	270	300	330	360	400	400	400
Innovation Projects started (# projects)	3	3	4	5	5	5	5	5	5	10	50
New Markets Entered (# new markets)	0	2	5	-	-	-	-	-	-	-	5
ACCELERATE: ENTREPRENEURSHIP PROGRAMS											
Incubator (# firms)	20	25	30	50	80	120	140	160	180	200	200 start-ups
Accelerator Programs	1	2	2	2	3	3	4	4	5	5	5 accelerator programs.
(# programs, # firms completed)	0	6	10	20	30	35	50	60	70	75	75 companies have completed.
VENTURE FUND											
	20	30	40	50	60	70	80	90	100	100	100 active angels.
	1	1	1	2	2	2	2	2	2	2	$250M assets under management,
Venture fund (Network, Funds, AUM)	$1M	$5M	$50M	$100M	$250M	$250M	$250M	$250M	$250M	$250M	over two funds.
WORK: REAL ESTATE DEVELOPMENT											
Co-Working Companies (# firms)	20	22	25	28	30	35	40	45	50	50	50
Test facilities operational (# operational)	0	0	1	1	2	3	4	5	5	5	5
Organizations co-located (# firms)	20	25	40	50	60	70	80	90	100	100	100 firms

THE 2023 SCORECARD

	2021	2022	2023	2023 Target state
INNOVATION CLUSTER				
Members recruited (# firms)	100	150	200	200
Innovation Projects started (# projects)	3	3	4	4
New Markets Entered (# new markets)	0	2	5	5
ACCELERATE: ENTREPRENEURSHIP PROGRAMS				
Incubator (# firms)	20	25	30	30 start-ups
Accelerator Programs	1	2	2	2 accelerator programs.
(# programs, # firms completed)	0	6	10	10 companies have completed.
VENTURE FUND				
Venture fund (Network, Funds, AUM)	20	30	40	40 active angels.
	1	1	1	$50M assets under management,
	$1M	$5M	$50M	over one fund.
WORK: REAL ESTATE DEVELOPMENT				
Co-Working Companies (# firms)	20	22	25	25
Test facilities operational (# operational)	0	0	1	1
Organizations co-located (# firms)	20	25	40	40 firms

OCEAN FUTURES HUB AND CLUSTER



7.0 CONCLUSION

The Ocean Futures Hub & Cluster has had broad interest from stakeholders in industry, government, academia, and the investment community. Many of them are committed to the success of the OFH&C and are moving forward with convening a group to form a non-profit which will begin work as the core of OFH&C, continuing with detailed design and planning for the rapid start of a transformative collaboration. There has been strong support and a substantial investment of time through the planning and design process from:

- South Island Prosperity Partners
- City of Victoria
- ABCMI (Association of BC Marine Industries)
- Several local ocean technology companies
- Large national ocean economy companies
- Ocean Networks Canada/University of Victoria

An ideal starting location has been identified to host the first employees and co-located ocean tech companies. The location is in the heart of the City of Victoria's Arts & Innovation District, creating opportunities for synergy with other innovation initiatives. There are also several unused or under-used waterfront and near-waterfront properties that would allow for rapid expansion with the attraction of start-up and international companies.

The core of the stakeholder group is several fast-growing ocean tech companies with increasingly blue economy focused activities. Together with the other stakeholders, there is a unified desire to make the blue economy opportunities a focus of activity

at the OFH&C. A rapid expansion of these activities, through stimulation of start-ups and scale-ups at the OFH&C, and the rapid global growth of Blue Finance funds seeking quality investments make the Ocean Futures Hub and Cluster an ideal part of the rollout of Minister Jordan's blue economy Strategy for Canada.

Major industry partners have expressed interest in participating through their Industrial and Technological Benefits Policy requirements, and investing in research activity that mutually benefits the local and Canadian blue economy. Participation would be strongly encouraged through substantial stimulus or seed contributions made by all three levels of government. The local government of the City of Victoria and the federal government through Western Economic Diversification funding have already been supporting the genesis of this activity and are continuing to support the first phase of the launch through this report. Due to the scale of the need and opportunity for the full implementation of the OFH&C, it will be necessary for both the provincial and federal governments to support the initiative on a much larger scale. Substantial support from senior government will unlock private sector follow-on investment, resulting in economic growth opportunities for BC and Canada.

The people and organizations that supported this initiative to this point are standing by and ready to scale up the OFH&C rapidly to support the transformation of ocean industries for the 22nd century. Members of industry and the VC investing communities have been primed and are watching developments closely. In recent years Canada has been slipping in global relevance in the ocean economy as the blue economy rapidly grows and other countries' governments support their ecosystems. We have an opportunity to reclaim our space as a global leader with by far the longest coastline of any country in the world. The time to seize that opportunity is now.

SOUTH ISLAND
PROSPERITY
PARTNERSHIP

OCEAN FUTURES HUB AND CLUSTER

ON SOUTHERN VANCOUVER ISLAND

BUSINESS CASE

CONDENSED

Arts & Innovation District

Victoria 3.0 Recovery Reinvention Resilience

Progress Report

1

Purpose

The purpose of this report is to provide Council with a progress report on the action items outlined in the City's economic action planned called Victoria 3.0 Recovery Reinvention Resilience.

Approve $117,000 from the Financial Plan contingency budget to support the initial planning for the Arts & Innovation District.

2

Summary

Victoria 3.0 Recovery Reinvention Resilience is an economic action plan that aligns with the City's Official Community Plan to 2041 and was adopted by Council on May 14, 2020.

Goals:

- An immediate focus supporting businesses to adapt to a new normal and become more resilient considering lessons learned during the Covid-19 pandemic
- Creating a city and an economy that is inclusive of everyone
- Building a sustainable economy over the next two decades that aligns with the City's Climate Leadership Plan and creates a pathway to low-carbon prosperity

3

Summary

Victoria 3.0 was informed through sector specific roundtables held in the fall of 2019:

- Tech, Advanced Education Research & Development
- Indigenous & Newcomer Businesses
- Ocean Futures Cluster Development
- Neighbourhood Business & Social Enterprise
- Small Business & Finance
- Youth Economy

Working Groups Established:

- The Ocean Futures Cluster & Innovation Hub
- Big Idea (Arts & Innovation District)
- Business Support

4

Summary

The plan includes 10 categories with 69 action items under two key areas of focus:

- Recovery – focused on the small business sector in our local economy
- Reinvention and Resilience – focused on building on Victoria's strengths and reinventing Victoria to meet the challenges and seize opportunities in preparation for the 22nd century

At the time of this report, 16 action items have been completed or partly completed within the first year.

5

Summary

Focus on the right issues and metrics for success - the first step was to research other global cities.

The City with other funding partners engaged "The Business of Cities" an urban intelligence firm that works with more than 100 cities and companies worldwide each year.

Examined the Greater Victoria region under three areas of focus:

- Benchmarking Victoria's Economy
- Case Studies – Learning from International Experience
- Victoria's Global Fluency

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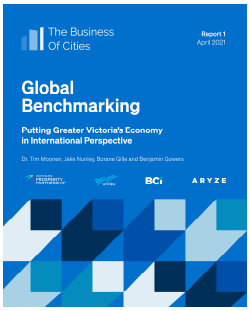

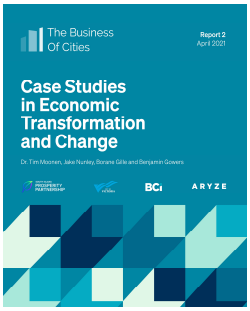

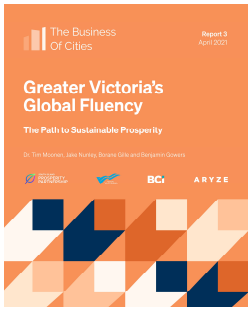

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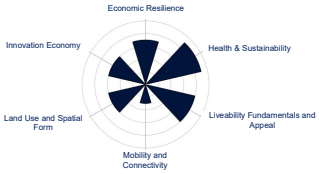
Key Findings

1. Greater Victoria is among a **distinctive peer group** of small city regions with a high quality of life, including Aarhus (Denmark) and Newcastle (Australia). It also has parallels with leading sustainable, inclusive & high tech regions such as Helsinki and Eindhoven.
2. As a region Greater Victoria has **many strengths** which set it apart internationally in this century of cities and climate change: natural environment, education, lower pollution, superior healthcare, lower crime, and more compact spatial form. It also has momentum in fast growing sectors.
3. These strengths are not permanent. **Without more intentional efforts** to grow the innovation economy and the diverse jobs it provides, Greater Victoria is likely to lose talent, fall down a 'medium-productivity, low-affordability' development path, and get stuck in a 'retirees plus tourism plus government' formula.
4. Other regions similar to Victoria have been **more deliberate for longer** in preparing for their future. They have shown the benefits of telling a stronger story; establishing Downtown as a residential, innovation and cultural centre; and building partnerships with other cities in their region. They use the jobs and growth these generate to reinvest in the housing and infrastructure and services that make their region great.
5. Covid-19 brings into focus the **opportunity for Victoria** to establish itself as a reference point for what people want from a 21st century city.



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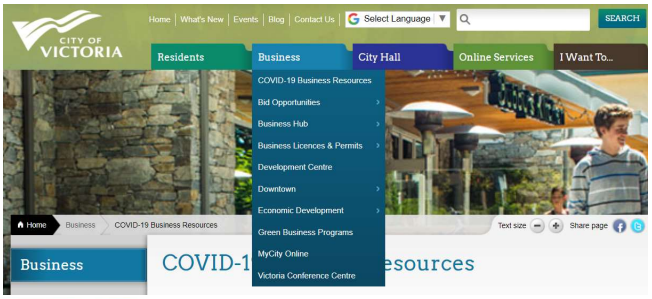
Issues & Analysis

Recovery: Our Small Businesses are the Lifeblood of our Economy

1. Develop a “How to Adapt to a New Normal” toolkit based on WorkSafeBC sector guides
2. Develop an “Emergency Resilience” toolkit for Business



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3. Create opportunities for restaurants and retailers to do business in public space
4. Create more space for pedestrians downtown and in village centres to meet physical distancing requirements

10

5. Develop a Welcoming Cities Strategy

- Task Force initiated in November 2020
- Work is underway and public engagement has started to seek input on how Victoria can align with the international Welcoming Standard, which includes a focus on employment and economic inclusion

6. Undertake a Feasibility Study for the Victoria Conference Centre (VCC)

- Destination Greater Victoria, as the sales and marketing partner for the VCC, contracted CBRE to conduct a convention business growth potential and feasibility study, which was completed in September 2020
- Recovery trends will become evident during 2022 and the feasibility study should be revisited in fall 2022.

Issues & Analysis

Reinvention and Resilience: Building a Strong and Resilient Local Economy

Create an Ocean Futures Cluster

1. Create an Ocean Futures Cluster Task Force to develop a strong value proposition and Cluster implementation
2. Develop a Business Case and Value Proposition
3. Champion the Ocean Futures Cluster and Innovation Hub with Provincial and Federal governments
4. Develop a Governance Structure for Cluster Implementation

Issues & Analysis

- To help build on all the ocean and marine-related businesses and major assets in our city and region
- To grow existing enterprises and attract new ones where the resulting products, services, technology, know-how, and intelligence support the arc that leads to sustainability and climate mitigation and adaptation
- Work has transition to South Island Prosperity Partnership
- COAST is a stand alone non-profit with a governance structure and interim board created to lead this work

COAST

Centre for Ocean Applied Sustainable Technologies

Issues & Analysis

2021 Actions

- Downtown Clean & Safe Committee / Downtown Ambassador Program
- Relaunch the ShopYYJ buy local campaign
- Build Back Victoria Program – promote the continuation of the program through print & social
- 'Cut the Red Tape' workshop to discuss the best and most efficient ways for the City to support business
- Mitigation Strategy to improve communication and support businesses impacted by development
- Retail Strategy to be reviewed in T3 2021 on timing to engage a consultant to undertake this work

15

Issues & Analysis

Re-Do Victoria's Brand and Story

- 2023-2026 action – work is underway on a regional basis led by the South Island Prosperity Partnership as work arising from the Rising Economy Task Force
- Task Force subcommittees identified the need to tell our new story as a key element of post-pandemic recovery
- Engagement opportunities for the City, residents and businesses

16

Issues & Analysis

Arts & Innovation District

17

Issues & Analysis

Arts & Innovation District

- Currently envisioned by the Downtown Core Area Plan and Official Community Plan to accommodate future residential development
- Opportunity to consider a more diverse range of housing opportunities to support the District, as well as exploring opportunities to add arts and employment uses east of Douglas Street.
- More specific planning for the District to contribute in the coming years to Victoria's economic recovery and future.
- Planning staff propose a two-phase process; kick-off phase in 2021 requiring $117,000, followed by the completion of a master plan for the district if resources are made available through the 2022 budget process or other funding opportunities

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Issues & Analysis

Resource impacts due to COVID-19:

- Victoria 3.0 envisioned additional staffing capacity to support implementation
- Business Ambassador fully committed to Build Back Victoria program
- Head of Business & Community Relations – oversees Economic Development, Victoria Conference Centre, Arts Culture & Events and Neighbourhoods divisions
- Additional staff capacity is required to support economic recovery and economic inclusion
- Staff will propose an additional staff position for Council's consideration as part of the 2022 Financial Plan

Options & Impacts

Option 1: That Council approve $117,000 from the 2021 Financial Plan contingency budget to support the initial planning for an Arts & Innovation District, and that the second phase of funding be considered in the 2022 budget. (Recommended)

Staff would initiate a process in 2021 to undertake two studies:

- a land economics and market potential study, and
- a high-level review of existing environmental conditions to identify possible constraints on the district.

This would be followed by a round of focus groups with key sectors interested in the future of the district and a workshop setting directions for the planning process.

Conclusion

One year on, Victoria 3.0 has delivered on several action items providing immediate support to businesses impacted by COVID-19 and significant action items to ignite economic recovery in the future.

Staff look forward to working closely with business leaders, community partners and organizations to continue delivering the actions set out in Victoria 3.0.

Staff recommended that Option 1 be supported. This would allow preliminary planning for the Arts and Innovation District to be initiated in 2021 and make progress towards the vision for this District as outlined in Victoria 3.0, in anticipation of future development pressures and as part of Victoria's economic recovery.

Committee of the Whole Report
For the Meeting of May 20, 2021

To: Committee of the Whole **Date:** May 4, 2021

From: Curt Kingsley, City Clerk

Subject: Recommendation for Seed and Stone at 1150 Douglas Street

RECOMMENDATION

1. That Council direct staff to advise the Liquor and Cannabis Regulation Branch (LCRB):

The Council of the City of Victoria supports the application of Seed and Stone at 1150 Douglas Street to receive a provincial cannabis retail store license with the following comments:

a. The Council recommends that the Liquor and Cannabis Regulation Branch issue a license to Seed and Stone at 1150 Douglas Street.

b. Bylaw and Licensing Services and Sustainable Planning and Community Development did not raise any concerns about this referral in terms of community impacts.

   The Victoria Police Department notes that a mall is a popular place for young people for both employment and socialization.

c. Residents' views were solicited through a mail-out to property owners and occupiers within 100 meters of this address and to the relevant neighbourhood association.

   The City sent 1146 notices and received 4 responses, including correspondence from the Downtown Residents Association received after the end of the opportunity for public comment.

2. That Council direct staff to advise the LCRB of Council's recommendation subject to the applicant's compliance with applicable City bylaws and permits.

EXECUTIVE SUMMARY

The Province of British Columbia is responsible for licensing cannabis retail stores. The Province refers applications to the City for a positive or negative recommendation, which must include residents' views. The City's *Cannabis Retail Store Licensing Consultation Policy and Fee Bylaw 18-120* establishes a public consultation process and fees to manage referrals.

On January 14, 2021 Council approved a rezoning for this location to allow cannabis retail use.

The applicant has been compliant with the municipal bylaws which require that an applicant first obtain a provincial cannabis retail store license and a municipal storefront cannabis retailer business license before opening for business.

The City sent 1146 notices and received 4 responses, including correspondence from the Downtown Residents Association received after the end of the opportunity for public comment.

As a result of Council's recent decision to approve the zoning for a cannabis retail store at this location, staff recommend Council provide a positive recommendation for Seed and Stone at 1150 Douglas Street.

PURPOSE

The purpose of this report is to seek a Council resolution, in accordance with the requirements of the *Cannabis Control and Licensing Act*, regarding an application by Seed and Stone at 1150 Douglas Street to obtain a provincial cannabis retail store license.

BACKGROUND

The Liquor and Cannabis Regulation Branch issues cannabis retail store licences under the *Cannabis Control and Licensing Act* (the Act). LCRB refers an application to the City so that Council may recommend to issue or not to issue a provincial cannabis retail store licence. If Council provides a negative recommendation, the LCRB may not issue a licence to the applicant at this location.

As a part of the local government recommendation, the Province requires that the City consider the location of the proposed cannabis retail store, provide comments about community impact, and include the views of residents. The *Cannabis Retail Store Licensing Consultation Policy and Fee Bylaw* establishes a public consultation method and fees. Owners and occupiers of parcels within 100 metres of the proposed location, and the neighbourhood association for the area, and relevant City departments may provide written comments.

A provincially licensed cannabis retail store must obtain a municipal business licence to operate in the City. The *Business Licence Bylaw* and *Storefront Cannabis Retailer Regulation Bylaw* 19-053 set out licensing and operating conditions for storefront cannabis retailers. This includes the requirement to ensure that windows on any street frontage of the premises are not blocked by translucent or opaque material, artwork, posters, shelving, display cases or similar elements.

To date, Council has provided 17 positive recommendations and no negative recommendations to the Province in response to proposed cannabis retail store referrals.

ISSUES AND ANALYSIS

There is no specific City policy to guide staff in evaluating a proposed cannabis retail store. Staff consider the applicant's compliance and enforcement history during previous operations as a cannabis retail store, if applicable, and input from residents and businesses.

<u>Applicant</u>

Seed and Stone is proposing a cannabis retail store at 1150 Douglas Street.

On January 14, 2021 Council approved a rezoning for this location to allow cannabis retail use.

The applicant has been compliant with the municipal bylaws which require that an applicant first obtain a provincial cannabis retail store license and a municipal storefront cannabis retailer business license before opening for business.

Community Impact

Bylaw and Licensing Services and Sustainable Planning and Community Development did not raise any concerns about this referral in terms of community impacts.

The Victoria Police Department notes that a mall is a popular place for young people for both employment and socialization.

The Victoria Police Department comments are attached as Attachment A.

Residents' Views
The City sent 1146 notices and received 4 responses, including correspondence from the Downtown Residents Association received after the end of the opportunity for public comment.

Residents' views are attached as Attachment B.

The Downtown Residents Association letter is attached as Attachment C.

Applicant's Response
The applicant provided a letter responding to the staff report which is attached as Attachment D.

OPTIONS AND IMPACTS

Option 1 – Refer application with a positive local government recommendation to LCRB (Recommended)

This option would enable to LCRB to issue a provincial cannabis retail store license.

Option 2 – Refer application with a negative local government recommendation

This option would prevent the Province from issuing a license to the applicant in this location. The applicant could apply at another location.

Accessibility Impact Statement
The recommended option has no accessibility implications.

CONCLUSION
On January 14, 2021 Council approved a rezoning application at 1150 Douglas to allow cannabis retail use. The applicant has been compliant with municipal bylaws which require a provincial and municipal license before operating a cannabis retail store business. A positive recommendation would allow the Province to continue the provincial licensing process.

Respectfully submitted,

Monika Fedyczkowska Legislative and Policy Analyst	Curt Kingsley	Susanne Thompson Deputy City Manager

City Clerk

Report accepted and recommended by the City Manager

List of Attachments
Attachment A: Victoria Police Department comments
Attachment B: Residents' views
Attachment C: Downtown Residents Association letter
Attachment D: Letter from applicant

Attachment A – Victoria Police Department Comments

The location is in the Bay Centre mall at 1150 Douglas St and is only a block away from another Seed and Stone at 901 Gordon St. It should be noted that malls are a popular place for young people for both employment and socialization.

The Victoria Police Department does not have any site-specific comments with respect to this application as we would reply upon the existing fit and proper results through the LCRB and their background checks through the RCMP, and the community consultation process through the City of Victoria, Sustainable Planning and Community Development. The Victoria Police Department will not be conducting any further background investigation on the application, partly due to the lack of information in the application.

[redacted]

From: Laura S. [redacted]
Sent: April 1, 2021 12:44 PM
To: Legislative Services email <LegislativeServices@victoria.ca>
Subject: Provincial License Application

Mayor and Council

I own a business at 124-645 Fort St.

This is in regards to Seed and Stone at 1150 Douglas St

I would like to start my email by saying that I am very disappointed in all of you. You are destroying our beautiful city and allowing dangerous and addicted people to live in Beacon Hill park and terrorize the general public by using the car free corridor you have created on Vancouver St to travel back and forth between Beacon Hill and Pandora St, unmonitored by passing traffic. Yet you have the arrrognace to ask for feedback about a Lekwungen owned business and whether they should be granted a permit to operate. How dare you exercise such a colonial perspective. You don't even bother to ask the citizens of Victoria if we WANT your ridiculous and badly designed bike lanes, permanent street closures and abominable leadership. You don't ask if we are Ok with the most dangerous in society turning our city parks into violent slums unsafe for families and children, yet you have the audacity to ask THIS.

Should members of the Lekwungen Nation be allowed to open a business ON THEIR OWN UNCEEDED TERRITORY??? YES A RESOUNDING ABSOLUTELY YES.

With extreme disappointment
Laura Shortt, a fourth generation Victorian and Downtown Business Owner who cannot wait to see ALL of you massive disappointments get out of city hall faster than yesterday.

[redacted]

From: Jerry-Lee Cerny[redacted]
Sent: April 1, 2021 3:49 PM
To: Legislative Services email <LegislativeServices@victoria.ca>
Subject: Submission of input regarding a provincial license application for a cannabis store at 1150 Douglas St., Victoria, BC

To Whom It May Concern,

Regarding a cannabis store proposed for 1150 Douglas St., Victoria, BC., I would first ask:
Who owns this cannabis business? Are they locals or not?
Who decides on the zoning for this area of downtown Victoria that permits a cannabis store?
Do the people who make the above decisions live in Victoria, BC?
And do they live in downtown Victoria BC close to where this cannabis store may exist ?
Do the people making the above decisions have any experiences with either consuming or using cannabis and/or living with or close to people who purchase and/or consume cannabis?
And, would the people who are making the above decisions choose to live close to a cannabis store?
Who will profit from this cannabis store business?
And will the taxpayers' money be used either directly or indirectly to pay for any part of this cannabis business?

I have previously submitted my comments regarding possibly living close to a cannabis store. Also, I stated that there are a few other cannabis stores in downtown Victoria already. And, I commented on the fact that a cannabis store will have an effect on the neighbourhood here in downtown Victoria; it will not be a positive effect. I mean that, it will influence the neighbourhood by adding to an already volatile and transient environment. Will it encourage tourism? What will a cannabis store say about the city of Victoria to visitors, tourists, etc.? We do not need another cannabis store. We do need a walk-in clinic with nurse practitioners and/or doctors, a medical supply store, a neighbourhood police station, a laundromat, or even a hardware store here in downtown Victoria.
And what about parking for this cannabis business? And what about the possibility of the customers' consumption of the cannabis after purchasing it from this business here in the downtown area, and then driving a motor vehicle?

I have had experiences with cannabis, users of cannabis, and environments where cannabis is

consumed. I do not consider an environment, where people are high on cannabis, or any other substance that alters a person's judgement and mood, a healthy environment. I would suggest that other cannabis, liquor and pharmacy stores here in Victoria, BC., downtown and otherwise, be observed regarding their effect on the surrounding environment or neighbourhood. Have the businesses beside and/or close to 1150 Douglas St. been consulted regarding this cannabis store proposal?

Thank you,

Ms. Jerry-Lee Cerny (I reside in an apartment building at Fort and Douglas).

[redacted]

From: Greg Candy [redacted]
Sent: April 5, 2021 1:53 PM
To: Legislative Services email <LegislativeServices@victoria.ca>
Subject: Application for Cannabis retail at 1150 Douglas Street

To the Victoria City Council,

I own 2 condos in this beautiful area of Victoria (or it was when I bought them). This is becoming a bad dream/nightmare. This must be the 4th or more notice I've received concerning applications for Cannabis stores in a matter of months. This area of Victoria is likely to end up being the most concentrated area of cannabis retail area on earth. Is that the reputation you want for our City?

You clearly have no idea of the path this will lead us....you didn't foresee the path to allowing the homeless and drug users to camp in our parks or other trends that have made this city unattractive to businesses, investors and hard working people who pay for your budget. A lot of us did. I've lived and worked with drug addiction and the narrative of the current "experts" is complete nonsense. The data does not lie...the greater the "harm reduction" and the less dealing with the supply has only led to many multiplication of users and death and an increasing social cost. It's clearly not working. The same will happen with the explosion of cannabis retail.

Covid should have shown you in no uncertain terms what the loss of business and investment can do to your income. Concentrate on attracting investment in paying jobs, tourism and clean businesses and put your impractical social justice warrior agenda aside. We cannot house the disadvantaged or pay for social programs without taxpayers.

Any more of this and I will liquidate my assets in Victoria and find a more investor friendly area to put my money. Maybe you don't need me, but enough of us who vote with our feet will make Victoria the new Havana....and there are more of us than you suspect. We will have far more impact on your city than all the placard waving demonstrators put together.

Sincerely

Greg Candy

VICTORIA DOWNTOWN RESIDENTS ASSOCIATION

Mayor Helps and Council
City of Victoria
No.1 Centennial Square
Victoria, BC, V8W 1P6

19 April 2021

Re: Application for Cannabis Retail for 1150 Douglas Street

Dear Mayor Helps and Council,

The DRA LUC submitted a letter on this application on 19 October 2020 with regard to the rezoning. The concerns outlined in that letter remain unaddressed as the application moves to this stage.

The DRA LUC supported for the Staff's recommendation to decline the rezoning application to permit the use of a Storefront Cannabis Retailer. As observed by Staff, "the proposal is inconsistent with the *Storefront Cannabis Retailer Rezoning Policy*".

There are four properties within 400m of the subject property that have storefront cannabis retailer as a permitted use:

- 778 Fort Street is 177m away, is provincially licensed and has been operating at that location since 2014;
- 1402 Douglas Street is 216m away, is provincially licensed and has been operating at that location since 2015;
- 546 Yates Street is 160m away, non-operational and not provincially licensed; and,
- 826 Johnson Street is 370m away, has been operating as the Cannabis Compassion Club for 19 years at that location but is not provincially licensed.

Additionally, Staff point out that there is one independent high school, the Pacific Institute for Innovation and Inquiry that, at 170m away from the subject property, is within the 200m proximity requirement.

Proximity rules were established by Council to limit the number of Cannabis retailers to the point that the public is adequately served and operators do not need to sell to minors to make ends meet. There is a strong case that indicates a direct correlation between the viability of these businesses and compliance regarding sale to minors.

There is no shortage of ground floor retail properties for lease within the City and therefore no apparent impediment for the applicant to seek a location that complies with the current proximity rules. It is important that precedence is not set in relaxing these proximity rules

without a compelling rationale. We strongly encourage Council to uphold its wise decision to adopt the 400m proximity rule for Cannabis retailers and the 200m proximity rule for schools.

Retail cannabis operators are required to screen their windows to block the public's view into the retail units. These create "blank walls" along our streets. Ignoring the proximity rules increases the concentration of these operations in a small area, and in combination with other closed and empty retail units, adds to an increasingly uninviting and hostile streetscape with fewer eyes on the street.

Sincerely,

Ian Sutherland
Chair Land Use Committee, Downtown Residents Association

SEED & STONE

TEL 604.392.7772
seedandstone.com
Unit 300- 1688 152street
Surrey BC V4A 4N2

Please accept this letter in response to community feedback regarding the Seed & Stone application for cannabis retail at 1150 Douglas Street, Victoria

Over 1000 letters were mailed out with only 4 responses. Although most were against our application, I feel they were honest and fair concerns, all of which we will address below.

We appreciate the feedback and will continue to reach out to the Victoria businesses and community members to provide the best service possible with the community's health and safety at the forefront.

As the fathers of teen and pre-teen children, we at Seed & Stone understand the importance of keeping cannabis out of the hands of youth. Our proposed state-of-the-art storefront design with the inability for pedestrians to see inside the store and by limiting the use of the term "cannabis" we can shelter youth from cannabis sales. All staff do rigorous training including a section on requesting 2 pieces of ID from anybody looking under 25. Each budtender must take and pass a selling it right course which also helps to identify fake id.

We believe legal, government licensed and regulated cannabis retail storefronts aide in limiting black market sales. With cannabis retail in your community, you are less likely to find street dealers selling unhealthy products to underage community members

Our security plan will also assist in limiting cannabis use in public spaces surrounding the store

We fully understand the concerns brought forth by Respondents 2 & 3. The security of the residents and businesses in the area are always on top of our mind. Therefore, Seed & Stone will implement a security plan incorporating the RCMP's CPTED program. Crime Prevention Through Environmental Design not only helps reduce crime but also the risk of crime. On top of that Seed & Stone will provide non-intrusive lighting and no less than 12 security cameras that are monitored and enforced 24 hours a day which will be positioned strategically both inside and outside of our proposed unit

There is absolutely no connection between cannabis retail and crime, in fact, in Colorado, where cannabis has been legal since 2014, a study in the journal Regional Science and Urban Economics showed that crime rates dropped "substantially" in the areas around Denver dispensaries.

The legalization of cannabis has resulted in a 54% yoy decline in cannabis-related offences in Canada in 2019. The opening of legal cannabis retail stores has potentially prevented youth from entering into any type of illegal trade related to cannabis. Also, White Rock RCMP has not received any complaints regarding customers consuming cannabis in the immediate area associated with the current cannabis shop on Johnston Rd.

On June 19, 2018, the Senate passed Bill C45 and the Prime Minister announced the effective legalization of Cannabis date as October 17, 2018.
The Canadian Government emphasized three key goals of regulation:

TEL 604.392.7772
seedandstone.com
Unit 300- 1688 152street
Surrey BC V4A 4N2

- the protection of public health;
- the protection of young people;
- the reduction in criminality associated with the illegal market.

The reform was built on years of evidence demonstrating that the illegal status of cannabis did not prevent rising consumption and was associated with a range of other risks, from increased potency to the empowerment of criminal gangs. The provincial government stated "Economic development is a guiding principle of B.C.'s regulated approach to cannabis. In addition to protecting public health and safety,"

Seed & Stone also has a recycling, garbage, and graffiti removal program to keep the community safe and clean.

Click and collect service, multiple POS stations and separate lines for pick up will eliminate unnecessary traffic on the city sidewalk.

We look forward to working with City and its departments to resolve any concerns on an ongoing and continuous basis.

Vikram Sachdeva
Founder & CEO
Seed & Stone

References

1) Bill C46 - Bill C-46 - Legislative Background: reforms to the Transportation Provisions of the Criminal Code (Bill C-46) (justice.gc.ca)
2) RCMP CPTED - Crime Prevention Through Environmental Design (CPTED) (rcmp-grc.gc.ca)
3) Cannabis & Crime Are Cannabis Dispensaries and Crime Linked? | cannabisMD
4) Cannabis Crime Data – Statistics Canada
5) Government of Canada - A Framework for the Legalization and Regulation of Cannabis in Canada - Canada.ca
6) Province of BC - Learn about B.C.'s Cannabis Sector - Province of British Columbia (gov.bc.ca)

Attachment A: Process & Timelines
Comparison between Delegated and Non-Delegated Development Permits

Delegated Development Permit

(Complex)
(2 to 5 months)

Application Submitted	
Staff Review	2 days – 4 weeks
Potential Applicant Revisions (timeline driven by applicant)	2 – 4 weeks
Staff Review	1 days – 2 weeks
Staff Approval	

Note: these are estimated development application process timelines that make assumptions about the number of revised plans submitted to planning staff, CALUCs, and Advisory Design Panels. They do not represent all possible application timeline outcomes.

Delegated Development Permit

(Minor and consistent with Design Guidelines)
(3 days to 2.5 months)

Application Submitted	
Staff Review	4 weeks
Potential Applicant Revisions (timeline driven by applicant)	2 – 4 weeks
Staff refer to ADP	3 - 4 weeks
Revisions prepared to address staff and ADP comments (timeline driven by applicant)	2 – 4 weeks
Revised Plans circulated to staff and reviewed	2 - 3 weeks
Staff Approval	

Development Permit

(Not Delegated)
(4 to 6.5 months)

Application Submitted	
Staff Review	4 weeks
Potential Applicant Revisions (timeline driven by applicant)	2 – 4 weeks
Staff refer to ADP	3 - 4 weeks
Revisions prepared to address staff and ADP comments (timeline driven by applicant)	2 – 4 weeks
Revised Plans circulated to staff and reviewed	2 - 3 weeks
COTW Report preparation	4 - 5 weeks
Council ratify COTW motion	2 weeks

Development Permit with Variance

(5 to 7 months)

Application submitted to staff and referred to CALUC	
Staff Review	4 weeks
Potential Applicant Revisions (timeline driven by applicant)	2 – 4 weeks
Staff refer to ADP	3 – 4 weeks
Revisions prepared to address staff and ADP comments (timeline driven by applicant)	2 - 4 weeks
Revised Plans circulated to staff and referred to CALUC	2 - 3 weeks
COTW Report preparation	4 - 5 weeks
Council ratify COTW motion	2 weeks
Scheduling of opportunity for Public Comment	2 - 4 weeks
Opportunity for Public Comment	2 weeks

Attachment B: Process & Timelines

Comparison between Rezoning Application and Delegated Development Permits

Rezoning
(6 to 11 months)
(from date of complete application submitted)

Pre-application CALUC consultation	5 - 8 weeks
Application submitted	
Staff review with comments to applicant	4 weeks
Potential Applicant Revisions (timeline driven by applicant)	2 – 4 weeks
Staff refer to ADP, with concurrent Development Permit Application	4 - 6 weeks
Revisions prepared to address staff and ADP comments (timeline driven by applicant)	2 – 4 weeks
Revised Plans circulated to staff and reviewed	2 - 3 weeks
COTW Report preparation	4 - 5 weeks
Council ratify COTW motion	2 weeks
Scheduling of Public Hearing	2 - 4 weeks
Public Hearing	2 – 6 weeks

Delegated Development Permit
(Complex)
(2 to 5 months)

Application Submitted	
Staff Review	4 weeks
Potential Applicant Revisions (timeline driven by applicant)	2 – 4 weeks
Staff refer to ADP	3 - 4 weeks
Revisions prepared to address staff and ADP comments (timeline driven by applicant)	2 – 4 weeks
Revised Plans circulated to staff and reviewed	2 - 3 weeks
Staff Approval	

Note: these are estimated development application process timelines that make assumptions about the number of revised plans submitted to planning staff, CALUCs, and Advisory Design Panels. They do not represent all possible application timeline outcomes.

Options for Supporting Rapid Deployment of Affordable Housing

2021

CITY OF VICTORIA

1

Presentation

- Supporting Rationale
- Legal Parameters
- Definition - Affordable Housing
- Options & Examples
- Challenges & Benefits
- Next Steps
- Recommendation

2

Supporting Rationale

Council Policy and Directives

- The Victoria Housing Strategy Phase II
- COVID Response & Recovery
- OCP Amendments
- Housing Needs Assessment, 2020
- Housing Strategy Annual Review, 2019

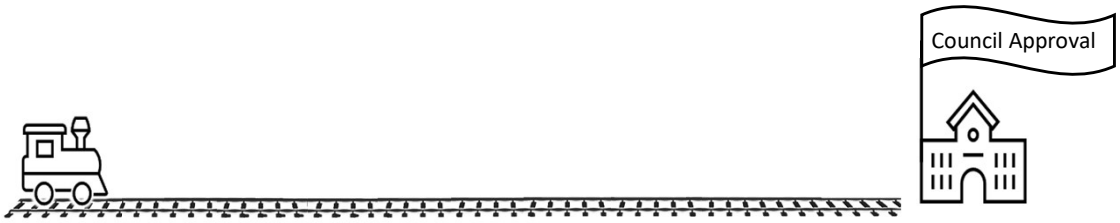
Supporting Rationale (Cont'd)

Housing Provider & Funder Feedback

- **Complexity and length of approval processes**
- **Uncertainty**
- **Funding**

Supporting Rationale (Cont'd)

Council Direction re: Priority Applications



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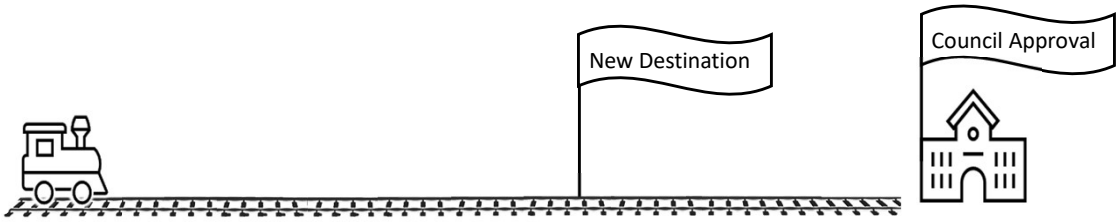
Shorten the Process Track



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Legal Parameters

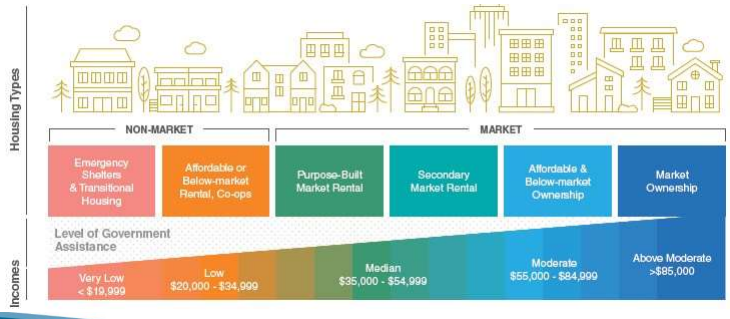
- **Complex web of legislation**
- **Proposed changes consistent with legal framework**

7

Affordable Housing Definition

a. owned and operated by a non-profit or government agency, or operated by a non-profit or government agency subject to a legal agreement with property owner, and

b. subject to a legal agreement securing affordability and rental tenure.



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Options: Tier One

Delegate DPs for affordable housing, with or without variances, to the Director of Planning.

Must:

- Meet affordable housing definition
- Be consistent with design guidelines

Time savings: 2 – 4 months

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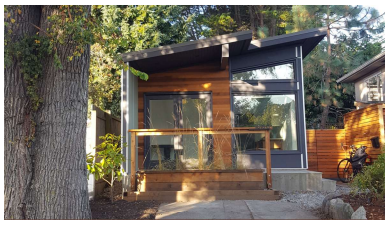
Tier One – Example 1

- **Garden Suites**

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Tier One – Example 2

- **New Buildings DPAs 10 & 16**

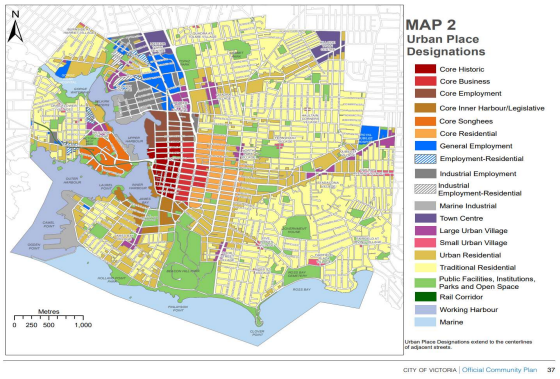
Tier One – Example 3

- **Parking Variances**

Options: Tier Two

Amend Zoning Bylaws to allow increased density, up to OCP max, for affordable housing projects.

Time savings: 3 – 9 months



Tier Two Example

R-K Townhouse Zone in Traditional Residential Designation in OCP

	Maximum Density (FSR)
Existing R-K Zone	**0.6:1**
OCP Traditional Residential	Up to **1:1**
Proposed Zoning Bylaw Amendment	Up to **1:1**, only for affordable housing projects

Tier Two Example

R3-2 Zone in Urban Residential Urban Place Designation

	Density (FSR)
Existing R3-2 Zone	Permitted up to **1.6:1**
OCP Urban Residential	Base density of **1.2:1** Maximum density of **2:1**
Proposed Zoning Bylaw amendment	Permitted up to **2:1**, only for affordable housing projects

Challenges

- **SRWs / Public Realm Improvement**
- **Public Consultation**

Benefits

- Accelerated timelines
- More affordable housing
- Greater certainty / funding
- Design oversight
- Senior Government option
- Reduced City resources

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Next Steps

- Consult with development industry, affordable housing providers and CALUCs
- Report on feedback with advancement of bylaws

18

Recommendation

1. That Council direct staff to:
   a) undertake focused consultation with non-profit affordable housing providers, the Urban Development Institute and CALUCs in relation to the proposal to amend the Zoning Bylaws and *Land Use Procedures Bylaw*, as identified in this report;
   b) in a subsequent report, provide Council with details of the feedback received and how the feedback has affected the amendments to the Zoning Bylaws and *Land Use Procedures Bylaw*.

And concurrently:

2. That Council direct staff to prepare amendments to the *Land Use Procedures Bylaw*, consistent with the "tier one option" in this report, to delegate the authority to the Director of Sustainable Planning and Community Development to issue all Development Permits, with or without variances, offering affordable non-market housing secured by legal agreement.
3. That Council direct staff to prepare amendments to the *Zoning Regulation Bylaw* and *Zoning Bylaw 2018,* consistent with the "tier two option" in this report, to allow the maximum density contemplated in the Official Community Plan to be the maximum density permitted for a specific site, where an affordable non-market housing development is proposed and affordable dwelling units are secured with a legal agreement to the satisfaction of Director of Sustainable Planning and Community Development and the City Solicitor.

Committee of the Whole Report
For the Meeting of May 20, 2021

To:	Committee of the Whole	Date:	May 7, 2021
From:	Philip Bellefontaine, Director, Engineering and Public Works		
Subject:	The City of Victoria Electric Vehicle Strategy		

RECOMMENDATION

That Council:

a) Receive the draft *City of Victoria Electric Vehicle Strategy* to support implementation of the Climate Leadership Plan for information (Appendix B).
b) Receive the draft *Electric Vehicle Strategy Technical Report* for information (Appendix C).
c) Direct staff to bring forward a 5 year capital plan including a budget request for 2022 as part of the 2022 Financial Planning process that is aligned with this strategy to support delivery of targets identified in the Climate Leadership Plan and Go Victoria.
d) Direct staff to bring back the final version of the City of Victoria Electric Vehicle Strategy for approval in Q4 2021.

EXECUTIVE SUMMARY

The City established community wide renewable energy targets in its Climate Leadership Plan (CLP) that include a transition to 30% renewable energy powered passenger vehicles by 2030 and 100% renewable energy powered passenger vehicles by 2050. In recognition that these are ambitious and targets requiring comprehensive City support, a draft Electric Vehicle Strategy (The Strategy) and associated draft Electric Vehicle Strategy Technical Report (The Technical Report) have been developed to guide investment and identify actions necessary to reach these targets.

The Technical Report analysis identifies that the current rapid rate of EV adoption in Victoria is unlikely to be sustained, and the CLP target will not be reached without further investment in, and expansion of both public and private EV charging infrastructure. While the City will continue to promote projects and advance policies to continue the mode shift to public transit, walking and cycling, it has an important role to play in supporting charging infrastructure for private and shared automobiles.

As more Victorians explore the possibility of buying an EV, finding a place to plug-in and charge up will become a growing challenge given that more than 78% of residents, mainly those who live in multi-unit residential buildings, currently have limited access to charging at home. Access to EVs as a low carbon mobility choice, and their associated lower running costs, will be disproportionately

more difficult to obtain for lower income households without investment in public and private EV charging infrastructure.

To help reduce this barrier to achieving Victoria's target, it is estimated that a potential total investment of up to $60 M in charging infrastructure is needed between 2021 and 2030, with the City's potential contribution being up to $15 M. The City's investment would be divided between public and private infrastructure with approximately $5.25 M allocated to public charging infrastructure in earlier years and up to $9.75 M expended on complementary incentives with other levels of government to retrofit existing buildings to support at-home EV charging in later years. The approach would target concentrated investment on expanding public infrastructure in the near term with a transition towards building retrofit incentives ramping up from 2025 onwards. With these investments and incentives, EV adoption is projected to increase from approximately 2% today to between 17% and 31% by 2030, depending on market conditions.

This phased approach reflects evidence on where the shorter-term infrastructure needs and user demands are, thereby sustaining EV adoption rates. It also builds in flexibility for the longer-term investment profile by allowing review and adjustment to happen as further data is collected and help ensure "right sizing" of future potential investments in what is a rapidly changing EV environment. Although the focus of the EV Strategy is on infrastructure, beyond investments and incentives, the strategy identifies complementary advocacy and regulatory options to further support reaching the CLP target. Given the critical leadership, funding and legislative roles of both the federal and provincial governments in the accelerated adoption of EVs, City advocacy will continue to push for the expansion of incentives and regulatory measures supporting adoption of EVs.

Go Victoria, the City's Sustainable Mobility Plan, supports advancing low carbon mobility choices through curb management and prioritization, using tools such as providing priority access to EVs, adjusting parking fee structures or introducing permit programs. These types of future zero emissions mobility incentive polices were also identified as part of the Climate Emergency High Impact Initiative to support the transition to zero emissions vehicles.

In bringing forward this Strategy, staff recognize that it is a first step in initiating a considerable expansion of the City's public EV charging network at a time of rapid change in the transportation industry. To maximize the effectiveness of investments, staff will track metrics such as use of EV charging infrastructure, sales of EVs in the community and region, and growth in access to charging for households, such as rental apartment dwellers and condominium owners as well as other mobility trends including car ownership, walking, cycling and transit modal share and estimated vehicle kilometres travelled. The City will also monitor broader trends of electric vehicle adoption within public fleets and car share services operating within the City. Metrics will be collected to help inform any recommended future Strategy and investment adjustments to support the CLP target seeking a transition to 30% renewable energy powered passenger vehicles by 2030.

PURPOSE

The purpose of this report is to share the directions contained within the draft City of Victoria Electric Vehicle Strategy.

BACKGROUND

The City of Victoria adopted the Climate Leadership Plan (CLP) in July 2018 which recognizes that on-road transportation accounts for 40% of community greenhouse gas emissions and identifies the transition to renewably-powered vehicles, along with increasing active transportation as key strategies to reduce the City's emissions. The CLP establishes a target to have renewable energy powering 30% of passenger vehicles by 2030. Passenger vehicles comprise over 80% of the vehicles registered in Victoria.[1]

Council declared a Climate Emergency in March 2019, and in November 2019 adopted 3 High Impact Initiatives (HII's) within the "Low Carbon Mobility" Sector of the Climate Action Plan:

- Expand walking, rolling and cycling infrastructure
- Advance bus rapid transit
- *Expand EV infrastructure, policies and incentives*

Over the past eight years the City has initiated and been expanding its public EV charging network with the installation of EV charging stations in City parking lots, as well as on the street. The City currently owns and operates 19 Level 2 public charging stations and hosts two DC fast charging (DCFC) stations which are owned and operated by BC Hydro. The City is planning to install additional Level 2 charging stations and an additional two DCFC charging stations in 2021/22. The City's charging network is growing, but an enhanced level of investment is necessary to achieve the CLP renewably-powered vehicle target.

In July 2020, the City of Victoria amended the Zoning Bylaw and Zoning Regulation Bylaw to require EV charging infrastructure in all new residential developments and commercial developments with provision for more than 5 parking spaces, with changes that came into effect on October 1, 2020. While this sets the city up for success longer-term there remains an existing EV charging infrastructure gap for which the strategy identifies specific investment priorities.

In August 2020, the City hired Dunsky Energy Consulting to support the City of Victoria Electric Vehicle Strategy and help guide how the City could best reach its CLP renewably-powered passenger vehicle target. The Strategy examines the current rates of EV adoption in Victoria, forecasts its alignment with the 2030 CLP renewably-powered vehicle target, and assesses the barriers and potential approaches to address the shortfall identified.

ISSUES & ANALYSIS

Electric vehicles have become the pre-eminent force in the renewably-powered vehicles sector in Victoria. The modest driving distances, EVs added benefits of low noise, good performance in our mild climate, and low carbon and zero air pollution emissions, have made them a preferred choice over competing renewably-powered vehicle technologies. While through other strategic plans the City will continue to encourage mode shift, reduced vehicle kilometres travelled and reduced vehicle ownership rates through land use planning and mobility infrastructure investments, the goal of the CLP is to increase the low-carbon / renewably-powered proportion of vehicles that are operating on city streets.

[1] In this context a passenger vehicle is a motor vehicle that is used primarily to carry people on highways and streets. Most cars, station wagons, minivans, SUVs, and some pick-up trucks are passenger vehicles.

In Victoria, 13% of new vehicle sales in 2020 were EVs, according to the most recent data available. With the highest percentage of EV sales in Canada, Victoria and the Capital Region are leading the province in renewable-powered vehicle adoption and progress towards the City's 2030 CLP target is trending in the right direction. However, forecasting and analysis completed by the City's consultant team, which is described in the Technical Report (Appendix C), finds that over 80% of new vehicle sales in the City will need to be EV by 2030 in order to reach the City's target, which relates to total passenger vehicles, as opposed to new vehicle sales. The forecasting and analysis also finds that the initial pace of EV adoption will likely not be maintained due to barriers that are specific to Victoria, in particular, access to home charging. More than three-quarters (78%) of residents currently have limited access to charging at home, mainly those who live in multi-unit residential buildings.

Reliable, convenient, and cost-effective access to EV charging is a critical component to enabling Victorians who need a vehicle, for example, to access employment or education, especially where other mobility options are limited, to choose, buy, and operate EVs. Unlike the traditional model of gas stations, EVs can 'fuel up' anywhere with the proper electrical access and charging infrastructure. The most convenient location for EV drivers to charge their car is generally at home, where vehicles are frequently parked for long periods of time. The majority of today's EV owners in Victoria live in single-family homes where adding EV charging is relatively easy. In contrast, multifamily housing types like apartments have a number of potential constraints in providing access to home charging including the requirement for more substantial and challenging upgrades and not all residents who own a vehicle have the space to park it at their home with some multi-residential buildings, both traditional multi-storey buildings and house conversions, having limited on-site parking areas.

If provision is not made for Victoria multifamily and apartment dwelling residents to have convenient access to EV charging, growth in EV adoption will not be sufficient for the Climate Leadership Plan's target to be met. The figure below shows that based on the business-as-usual scenario, with no additional investment in charging and other policies and incentives, Victoria is on track for approximately 10% of passenger vehicles to be electric by 2030, 20% shy of the CLP target.

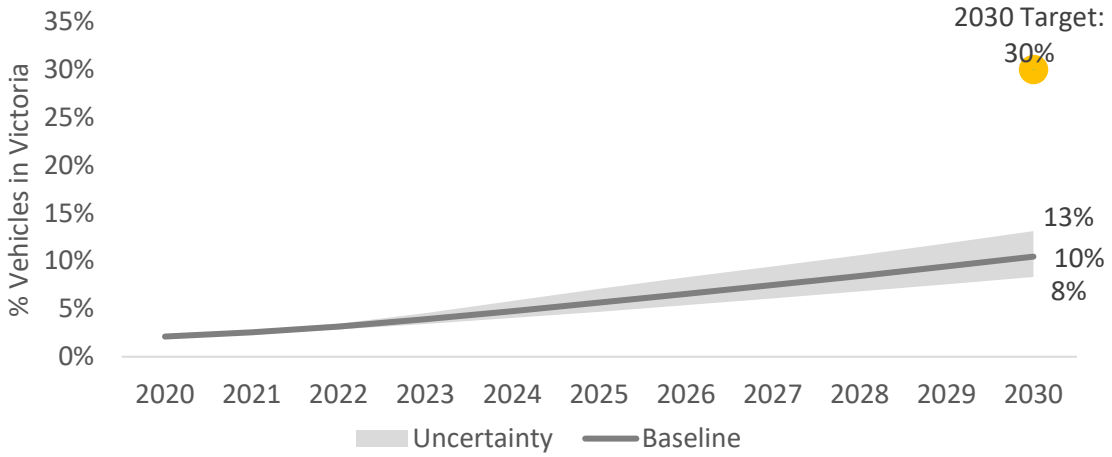


Figure 1: Business-as-usual (BAU) Forecast from the EV Strategy Technical Report by Dunsky

The draft City of Victoria EV Strategy has been developed to inform what actions are needed to reach the City's ambitious targets. The primary focus of the Strategy is improving access to EV charging for Victoria residents, and thus eliminating one of the key barriers to EV adoption.

Investment in EV Charging infrastructure is therefore central to the Strategy which includes a recommended 10-year capital investment profile.

OPTIONS & IMPACTS

Supporting access to EV charging is the single most impactful measure for the City to support EV adoption. A suite of investments and actions to bridge the gap between the projected business- as-usual rate of EV adoption and the desired rate targeted by the Climate Leadership Plan is recommended, and is a large focus of the City's draft EV Strategy.

To achieve Victoria's target, it is estimated that a total "global" investment of approximately $60 M in charging infrastructure is required between 2021 and 2030, with the City's contribution totaling up to $15 M. The table below summarizes the three main areas for City investment, public DC Fast Charging (DCFC), public Level 2 charging and EV-ready retrofits (see Appendix A for description of EV charging types).

Table 1: Total investment in charging infrastructure required between 2021 - 2030

Public Charging Network		Incentives
Level 2 Charging (650 charging ports)	DC Fast Charging (34 charging ports)	EV Ready Retrofits (40,000 parking stalls)
Global Investment $4.5 M	Global Investment $6 M	Global Investment $49.5 M
City Investment $2.25 M	City Investment $3 M	City Investment $9.75 M

The optimal investment in charging infrastructure would include an estimated $10.5 M into expansion of the City's public charging network through the installation of over 650 level 2 stations and 34 DC fast charging stations. This would provide convenient on-the-go and workplace charging options, as an alternative to home charging, which will help enable increased EV adoption. Based on the current grant opportunities available, it is anticipated 50% of this investment could be funded through the provincial and federal governments and other stakeholders such as the private sector, thus the City's contribution would be up to $5.25 M over the next seven years. The City would continue to advocate for an expanded regulatory and financial role from both the federal and provincial governments to reduce the City's investments.

<u>Public Charging - Expand Access to Level 2 Charging</u>

Level 2 public and workplace charging infrastructure can enable EV adoption for those with limited or no home charging, if the access is convenient and reliable. There is a portion of Victorians who have no access or shared access to home charging, but who would consider public or workplace charging an acceptable substitute by plugging in to charge all-day at work or on the street overnight.

Level 2 charging, while slower, is more affordable for both the installer and user and can be deployed quickly and with more flexibility than DCFC.

Public Charging - DC Fast Charging Hubs

DCFC public charging infrastructure provides rapid, on-the-go charging for residents without at-home charging. These rapid charging stalls can be centred within higher density residential areas or destination-based activity centres such as downtown or village centres. By creating a hub where people naturally gather can enhance EV adoption. Modelling revealed that expanded delivery of DCFC charging infrastructure continues to have a significant influence on EV adoption to a greater degree beyond the levels of Level 2 chargers.

Incentives - EV Ready Retrofits

Current market research suggests that to achieve mainstream adoption of electric vehicles, improving access to charging at home will ultimately be necessary. The City's recent bylaw amendments require new residential developments to install the electrical infrastructure to enable EV Charging. However, in order to reduce the current infrastructure gap of EV charging, a significant portion of Victoria's existing residential buildings will require retrofits to be EV Ready by 2030. The most cost-effective way to accomplish these updates for individual buildings is to perform a comprehensive retrofit where energized circuits are provided to every parking stall during a single renovation. Modeling suggests that this approach is scalable to enable EV adoption among most multi-unit building residents with access to parking.

There are an estimated 40,000 residential parking stalls associated with the city's multi-family housing stock. Were all of these parking stalls to be made EV charging ready, a total investment of some $49.5 M is estimated and would make home charging accessible to most Victoria residents. It is anticipated that government incentives and/or regulations will be necessary to achieve this level of investment by 2030. Currently, Provincial and Federal grant programs do not yet exist for these whole building retrofits which enable EV charging for all parking stalls. However, it is anticipated that such grants will likely become available in the future as whole building retrofits are much more cost effective per stall. Based on anticipated funding programs from other levels of government and expected demand from building owners, it is estimated that a City-funded top-up of 20% of retrofit costs would generate strong retrofit uptake. Thus, the City's contribution could be up to $9.75 M over the next 10 years.

EV's within the context of Victoria's future Mobility Profile

Looking past 2030, by 2050 all passenger vehicles in the City are targeted to be renewably powered. Given the long life of vehicles in Victoria, the next 10 years will be key for the City to lay the groundwork for a successful complete transition. The 40,000 residential parking stalls and associated retrofit costs represents a "snapshot" of the current supply of parking. Other City strategies envision lower car ownership, reduced parking supply, much expanded custom and shared mobility services as well as more walking, cycling and transit use. Within this context, along with the potential for future mobility policy changes it will be necessary and appropriate to continue to review and assess to allow for more detailed, refined and context specific recommendations within the residential retrofit investments. This, combined with the fact that electric vehicle technology and policy/regulatory environment are rapidly changing, is why it is recommended that the City update it's EV strategy and investment profile in 2025, ahead of any significant investment commitments for 2026-2030.

As Victoria is the central hub of the Capital Region, access to public charging will also benefit other municipalities beyond City borders. Coordination and collaboration with neighbouring municipalities and the CRD will be important to providing a cohesive and connected charging network across the entire region. Both the CRD and neighbouring municipalities are developing their own EV strategies and investment plans to expand the regional EV charging infrastructure.

EV Infrastructure Investment Profile

The recommended amount and timing of the public EV charging and incentives-based investments, including operations and maintenance (O&M), needed to support EV adoption and reach the City's 2030 target is shown in Figure 2.

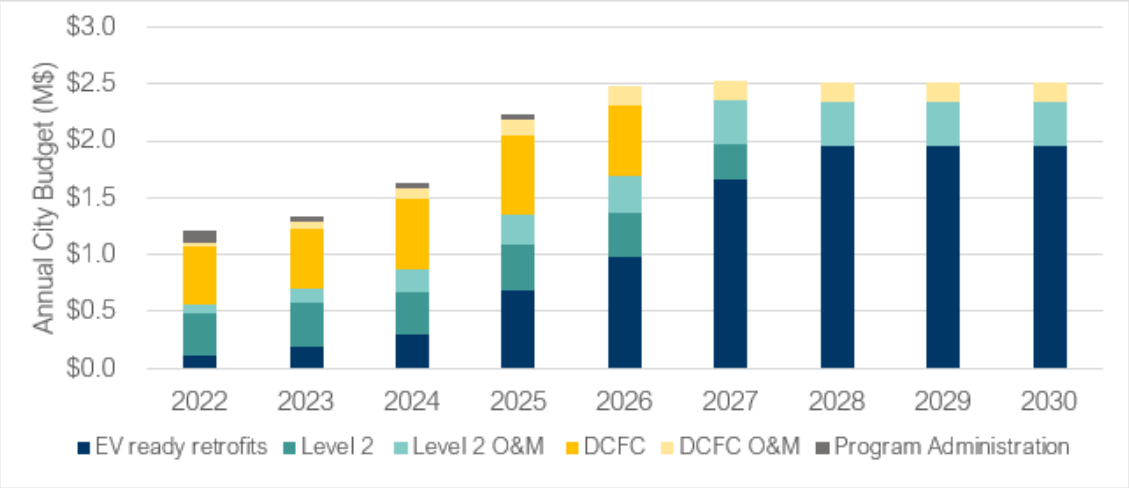


Figure 2: EV infrastructure investment profile identified in the City of Victoria EV Strategy

The initial expansion of infrastructure focuses on public charging infrastructure to serve Victorians without at-home charging access, with the majority of Level 2 and DCFC charger installations occurring in the first half of the decade. This reflects the known demand for this infrastructure in the shorter term, the immediate benefits public chargers bring in sustaining EV adoption rates and will generate additional investment income through the accumulation of low carbon fuel credits.

EV Ready retrofit incentives are more modest in the early years as the program ramps up, representing the time needed to attract participants and build the capacity of the local retrofit industry. The residential retrofit incentives are also the most sensitive to changing grant opportunities, future full redevelopment of buildings and the anticipated further reductions in the level of car ownership being achieved already due to other investments and policy directions being pursued in areas of transit, land use planning, active transportation, parking supply and the emergence of new mobility services such as car share. It is recommended that the EV strategy and investment profile be updated in 2025 to improve assumptions and incorporate learnings from the early deployment of incentives for EV ready retrofits prior to committing to larger investments in these incentives for 2026-2030.

The investment of City resources in a rapidly changing transportation environment comes with some uncertainty. To address this, an adaptive management process will be adopted including on-going review and metrics to support the effectiveness of investments and annual budgeting through the financial planning process. Staff will track metrics such as use of EV charging infrastructure, sales of EVs in the community and region, and growth in access to charging for households, such as

rental apartment dwellers and condominium owners. The City will also monitor broader trends of electric vehicle adoption within public fleets and car share services operating within the City.

It is projected that through combining the above three infrastructure investments, i.e. DCFC, Level 2 and residential EV Ready retrofits, supported by on-going advocacy and education and local, provincial and federal regulations, the City will be able to help address the barrier of access to charging. This, combined with financial incentives from other levels of government and organizations is anticipated to result in an EV adoption rate between 17% to 31%, depending on market conditions (see figure below). This reflects the magnitude of the challenge of transitioning a significant portion of the community's passenger vehicles in just 10 years and also highlights the fact that there many other market, economic and regulatory factors influencing the outcome that are beyond the City's control.

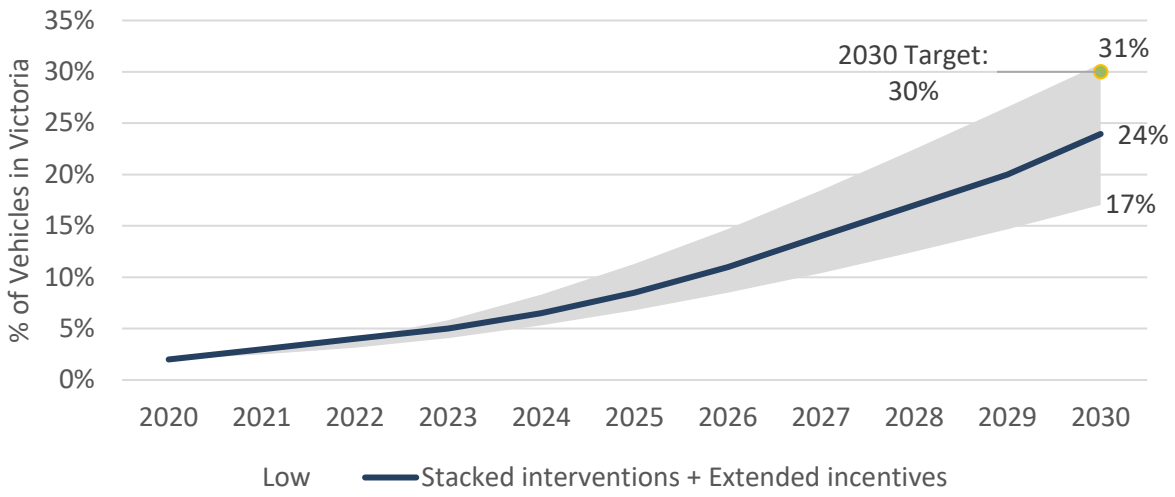


Figure 3: Electric vehicles as a percentage of vehicles in Victoria following infrastructure investments and extended incentives

While the federal and provincial governments have strong EV programs and targets in place, more of this positive progress will be needed to achieve the City's EV adoption targets. Advocacy to other levels of government is a key action in support of this draft EV strategy. Requirements and incentives provided by the Provincial and Federal governments should be expected to play a large and increasing role in advancing the EV market in the City. The City will advocate for Provincial and Federal policies to encourage the transition to EVs, such as rebates for new and used vehicles, incentives for comprehensive EV Ready retrofits and strengthening the provincial Zero Emission Vehicle Act.

At the regional level, the City will advocate for EV supportive policies, as well as play a role in supporting the coordination and alignment of regional efforts to invest in infrastructure.

City Staff will continue to track EV adoption rates in relation to the CLP target and provide Council with recommendations on adoption of measures based on overall progress towards the target. As the longer-term strategy focus shifts towards EV Ready retrofit incentives, the City may consider other regulatory tools to support EV adoption such as Zero Emissions Zones (ZEZs) or on street parking regulations.

Integration of Policy Objectives

Below is a summary of main policies and initiatives identified in the draft EV Strategy and how they integrate with some of the City's other key policy objectives.

Potential Policy or Initiative	**Objectives**
Invest in public Level 2 EV infrastructure and DC Fast Charging	**Environment:** Through supporting adoption of EVs this investment also supports clean transportation goals of OCP, Climate Leadership Plan and GoVictoria. **Equity:** Provides convenient, fast charging to users without access to charging at home. Locating multiple chargers in a single hub can support a larger volume of EV drivers as adoption increases. **Economic Development:** On-street Level 2 and DCFC can support opportunity charging. Access to such charging may be particularly important for ride-hailing, taxis, and other high-mileage vehicles. **Affordability:** Supports access to transportation with low operating and maintenance costs to all city residents.
Invest in EV Ready Infrastructure	**Environment:** Supports clean transportation goals of OCP, Climate Leadership Plan and GoVictoria. **Equity:** Provides an opportunity to access home EV charging to all City residents rather than just those in single family homes or new multi-family buildings. **Economic Development:** Retrofitting will support growth in clean tech businesses and regional electrical contractors.
Advocacy to other levels of Government	**Environment:** The City of Victoria's targets are aligned to support the Paris Agreement and deliver on the commitments made to address the Climate Emergency. **Affordability**: In some areas City targets are more ambitious than those of other levels of government. Advocating for stronger Provincial and Federal emission reduction targets may result in additional government regulations and investments by others reducing the need for municipal investment.

Accessibility Statement

In supporting a public EV charging network the City can ensure charging infrastructure is spread across all neighbourhoods and planned using appropriate design standards for accessibility.

2019-2022 Strategic Plan

Aligns with Strategic Objective Six: Climate Leadership and Environmental Stewardship

Impacts to Financial Plan

No impacts to the 2021 Financial Plan. Staff will bring forward as part of the 2022 budget process a recommended 5 year EV infrastructure investment and associated staffing resources.

Official Community Plan Consistency Statement

Supports Chapter 12, Climate Change, Goal 12(C) "Transportation options reduce fossil fuel dependence, help conserve energy and produce low greenhouse gas emissions and other air contaminants."

CONCLUSIONS

The requirements to meet a key target in the Climate Leadership Plan's transportation chapter and a component of Victoria's 2050 vision have been identified through the development of a draft EV Strategy and accompanying report. The draft EV Strategy identifies a pathway to achieving the City's ambitious targets that focuses on reducing one of the key barriers to EV adoption that the majority of Victorians are currently facing. By investing $15M over the next 10 years in public charging infrastructure and incentives that enable EV ready retrofits in existing buildings, the City can improve charging access for Victorians. This investment combined with continued incentives and programs from other levels of government can increase Victoria's EV adoption rates from 2% to 30% by 2030. Without this investment from the City, the majority of Victoria residents will not have timely access to EV charging infrastructure. This exclusion will disproportionately impact residents in lower cost housing and limit their access to the benefits of lower maintenance and fuel costs associated with electric vehicles.

Respectfully submitted,

Laura Berndt	Philip Bellefontaine
Manager, Energy and Climate Action	Director, Engineering and Public Works

Report accepted and recommended by the City Manager.

List of Attachments

Appendix A: EV Charger Types
Appendix B: Draft City of Victoria Electric Vehicle Strategy
Appendix C: Draft Electric Vehicle Strategy Technical Report

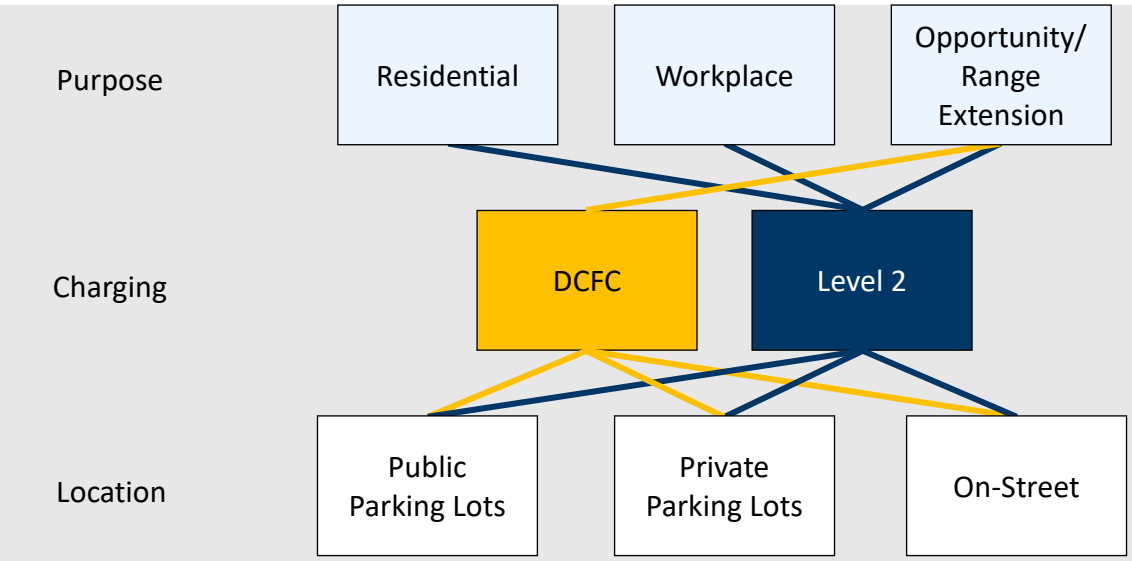
APPENDIX A

EV Charger Types

Table 1 Common EV charging infrastructure types and characteristics

	Level 1 (AC)	Level 2 (AC)	DCFC
Typical Output	1.5 kW (120 Volts)	7.2 kW (240 Volts)	50 kW – 350 kW (400 to 800 Volts)
Range Added per Hour (approximate)	8 km	40 km	300+ km
Equipment and installation costs	$150 - $1,500[1]	$2,000 - $15,000	$75,000 - $250,000
Typical use locations	Some homes, workplaces, public spaces	Homes, workplaces, public spaces	Major corridors, public spaces
Used by	BEV and PHEV	BEV and PHEV	Primarily BEVs

EV charging can be grouped by charging type, and further grouped by purpose (e.g. residential, workplace, "on the go" or opportunity charging) and location (e.g. private and public parking lots and on-street). For each charging type, Figure 1 shows the most appropriate purpose and locations.



[1] While a standard 120 V AC outlet can be used, an EV driver will need to provide their own portable charging infrastructure to make the connection possible. Alternatively, Level 1 charging can refer to a permanently affixed 120 Volt charging station that can be used by EVs without requiring additional equipment.

City of Victoria Electric Vehicle Strategy

The road to renewable-powered mobility

CITY OF VICTORIA

dunsky

AES

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EXECUTIVE SUMMARY

Victorians are leaders in low-carbon transportation. Residents choose to move in ways that are better for their health, the climate, and their community. The City of Victoria is looking to build on its citizens' leadership by planning for a city where transportation is safer, more sustainable, more convenient, attractive, and enjoyable for people of all ages and abilities with less environmental impact.

The Victoria region has made remarkable progress on electric vehicle (EV) adoption to date, with the highest percentage of EV sales anywhere in Canada. However, significant barriers stand in the way of achieving the City's bold target. Over 80% of Victorians live in multi-family homes. The key question is: how are they going to plug in and charge up their EVs?

The Victoria Electric Vehicle Strategy charts the course to reach the City's *Climate Leadership Plan* ambitious target of renewable energy powering 30% of passenger vehicles in Victoria by 2030. The Strategy was developed through stakeholder engagement, a review of leading practices, and modeling of Victoria's unique transportation landscape.

To reach the City's EV target, the following suite of strategic investments, incentives, and initiatives is recommended.

- Invest in EV Charging to enable Victorians to charge at home, at work, and on-the-go. From 2022 to 2030, the City should invest in the following three key types of charging infrastructure:

DC Fast Charging	Level 2	EV Ready Retrofits
$3 M in 34 ports	$2.25 M in 650 ports	up to $9.75 M in 40,600 stalls

- Fill Gaps in EV Incentives to maintain or enhance today's cost-effectiveness for EV ownership. The City should advocate at a minimum to keep the current provincial and federal incentives, or, if the current level of support drops off, maintain the financial benefit through City policies such as parking fees.

- Build a Supportive EV Ecosystem: to ensure EV ownership is accessible and equitable. We recommend developing a municipal EV charging program to facilitate and adapt the City's EV plans, enabling private investment in public charging, building local capacity with residents and EV businesses, and advocating for multilateral support and action.

Victoria's EV Strategy outlines an ambitious and comprehensive approach to putting the City on track to deliver a fair and equitable transition to electric mobility in the community and respond to the climate emergency.

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Connecting mobility and the environment in Victoria

Victorians are leaders in low-carbon transportation. Residents choose to move in ways that are better for their health, the climate, and their community. More Victorians are opting to walk, bike, or take transit, with these modes representing 57% of all trips.

The City of Victoria is looking to build on its citizens' leadership by planning for a city where transportation is safer, more sustainable, more convenient, attractive and enjoyable for people of all ages and abilities with less environmental impact. Mobility choices have a significant impact not only on daily life but on greenhouse gas emissions. The City of Victoria council declared a climate emergency in March 2019, highlighting the urgency of reducing emission. Transportation is a major opportunity for climate action as it accounts for 40% of emissions within the City in 2017 (Figure 1).

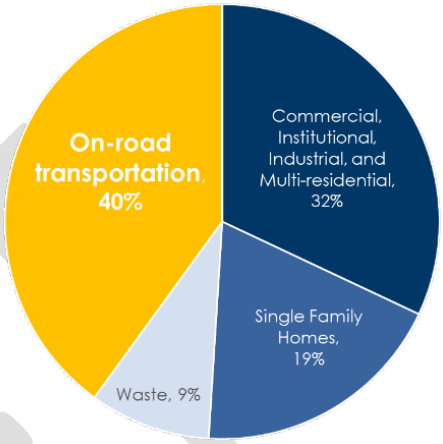


Figure 1 Victoria's community greenhouse gas emissions by sector in 2017. Source: City of Victoria

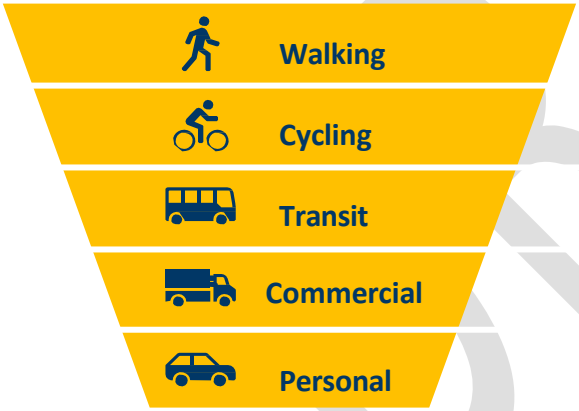


Figure 2 The mobility pyramid from Victoria's Official Community Plan

Victoria's 2050 vision is "a seamless and integrated mobility system prioritizes low carbon transportation including walking, biking, public transit and shared electric mobility options." Victoria's *Official Community Plan* sets out the hierarchy of mobility to prioritize pedestrians, cyclists, public transit, and commercial vehicles over single-occupancy vehicles (Figure 2). This transportation design emphasizes walking centres and thoroughfares, and strong cycling and transit link neighbourhoods to each other, employment areas, and amenities. Although personal vehicle transportation is at the bottom of the hierarchy, it will remain an essential component of travel because walking, cycling and transit do not accommodate everyone's needs. Victoria's electric vehicle strategy supports the electrification of personal vehicles while in alignment with Victoria's broader GoVictoria mobility strategy and its Climate Leadership Plan.

Leading Canada's EV Transition

The Victoria region has the highest percentage of EV sales in Canada.

Source: Statistics Canada, 2020

Victoria's Electric Vehicle Strategy

Victoria's Electric Vehicle Strategy (the "Strategy") identifies actions to help the City of Victoria meet its *Climate Leadership Plan* goal of renewable energy powering 30% of passenger vehicles registered in Victoria in 2030. This is an ambitious goal – while it is directionally aligned with current provincial and federal government targets, it reaches beyond their commitments. It is unlikely that the City will reach this goal without significant financial and policy support.

Renewable-powered transportation requires a transition away from internal combustion engine (ICE) vehicles to low-emission vehicles that do not rely on gasoline or diesel to power their motors. Electric vehicles (EVs) are the most mature, readily available and energy efficient low-emission vehicle technology. This Strategy covers both plug-in hybrid EVs (PHEVs) and battery EVs (BEVs).

EVs reduce greenhouse gas emissions in two ways. First, electric motors are more energy-efficient, resulting in less energy being needed to travel an equivalent distance to an ICE vehicle. Second, the energy used for EVs (i.e., electricity) is almost 100% renewable in BC.

Beyond the climate impact, Victorians benefit from an improved urban environment. EVs improve air quality by reducing the localized emission of air pollutants through the elimination of tailpipe emissions. In addition, they reduce noise pollution due to the relatively silent electrical drivetrain – a particularly relevant feature for electric trucks and buses.

There are important local economic impacts of a transition to EVs. EVs cost less to operate and maintain than ICE vehicles, which means that), EV owners have more disposable income for non-transportation needs. Further, EVs can help support the optimal use of electricity generation by leveraging vehicle-grid integration technologies. This can help reduce net electricity system costs in British Columbia, benefiting all residents. Aligning with Victoria's high-tech and innovation sector, a strong commitment to transportation electrification will signal that Victoria is a prime destination for innovative businesses.

A Vision for 2030

It's easy to smell the salt hanging in the air downtown without the nuisance of tailpipe emissions lingering along Government Street. Shops, patios, and sidewalks are humming with people arriving on foot and on wheels. Before joining the pedestrian bustle, people are locking up their bikes or dropping off and plugging in their EV carshare.

On Cook Street, three friends meet-up for a coffee. Sam arrives by foot after hopping off an e-bus, one that comes often and quietly. Beth was just plugging her EV into the neighbourhood fast charging hub to charge up for the week while she has coffee and then runs a few errands. Tim runs into Beth at the mobility hub where he is also dropping off his e-bike to charge.

Across the city, the passenger vehicles on the street are commonly electric. Most Victorians are choosing to replace their ICE vehicles with an electric one or none at all. Residents spend less time, and less money commuting, and enjoy quieter, safer streets.

Developing the EV Strategy

This Strategy outlines a plan that will support electric mobility in the City of Victoria, identifying concrete initiatives that the City can take to accelerate the adoption of electric mobility. The focus is on EV charging infrastructure as a principal pathway to accelerate the adoption of passenger EVs as well as policy, advocacy, and educational actions. Dunsky's Electric Vehicle Adoption (EVA)™ model was used to assess EV charging infrastructure needs and costs to achieve Victoria's EV targets.

The Strategy was developed along with a Technical Report which includes the detailed methodology and analysis and provides additional context and support to the EV Strategy. It includes a detailed overview of the EV infrastructure best practices from leading jurisdictions, and the relevant technical and policy findings. The Technical Report also includes the approach, data, assumptions used in the EVA model and the resulting adoption scenarios and forecasts.

The Strategy was developed in collaboration with a broad array of stakeholders, with feedback collected on the key areas for action, barriers and opportunities, and pathways to achieving Victoria's EV targets. Details on the engagement process and a list of participating organizations is presented in Appendix A.

Previous City Efforts

The City of Victoria has supported mobility electrification as a tool to achieve its Climate Leadership Plan and climate targets. The City is making efforts to build a low-carbon fleet with the goal of powering 80% of the City fleet with renewable energy by 2040. The City has made progress by adding e-bikes, PHEVs, BEVs to its fleet. Beyond its operations, the City is supporting broader EV adoption by supporting EV charging infrastructure through investment and policy.

In addition to efforts by the City of Victoria, EV adoption is supported by several provincial and federal policies and incentives for vehicles and charging infrastructure.

Supporting a Regional Approach

Victoria is at the heart of the Capital Region . The City is an employment and entertainment hub, with roughly 39,000 commuters entering Victoria daily from across the region.. Victoria's shift towards low-carbon mobility cannot be done in isolation. Victoria's EV infrastructure will serve vehicles both from residents and non-residents, just as the efforts of other municipalities will influence how well residents can move through the region. Therefore, the Strategy must align with the Capital Regional District's and other municipalities' EV planning and infrastructure efforts to ensure a cohesive and connected low-carbon transition.

From *Victoria 3.0*: *Recovery, Reinvention, Resilience*

"Sustainable, affordable transportation options will save people time and money, and make it easier and healthier to get to and from work."

Provincial Context

BC's Zero Emission Vehicle act mandates that 30% of new car sales will be electric by 2030 and 100% by 2040. The provincial target is on a similar, but slower trajectory as it is focused on new sales, in comparison to the City's target of all registered

vehicles. To reach this target, the Province has a series of financial incentives and educational supports for EV purchases and charging infrastructure. These supports have been considered within the Strategy. Higher provincial goals and accompanying supports in the future will benefit the efforts in this Strategy.

Equity Considerations

A key consideration in developing the Strategy was how to promote equity. This approach begins with a vision where everyone has access to clean, affordable, quality transportation. The Strategy aims to understand how EVs can support and be integrated into that vision. Access to EVs should not be limited by income or housing type, and, therefore, an equity lens is applied to the adoption interventions and was considered in each of the stakeholder workshops.

The shift to electric vehicles will also have workforce impacts in the community which should be considered to ensure a just transition. New skillsets are required for EVs because they require different and less maintenance. Training and job transitions will be required to support the workforce in the shift towards low-carbon transportation.

With the highest percentage of EV sales in Canada, Victoria and the broader region are leading the province in renewable-powered vehicle adoption.

Electric Vehicle Adoption in Victoria

The Victoria region has the highest percentage of EV sales in Canada. Early data from Statistics Canada from the first half of 2020 shows that 13.4% of new vehicle registrations were EVs.

Within the City of Victoria, there were 825 EVs on the road in 2020, representing approximately 12% of new vehicles and nearly 2% of all vehicles registered in Victoria[1]. And the pace of adoption is accelerating. From 2018 to 2020, Victoria saw many more EVs on the road, as shown in Figure 3.

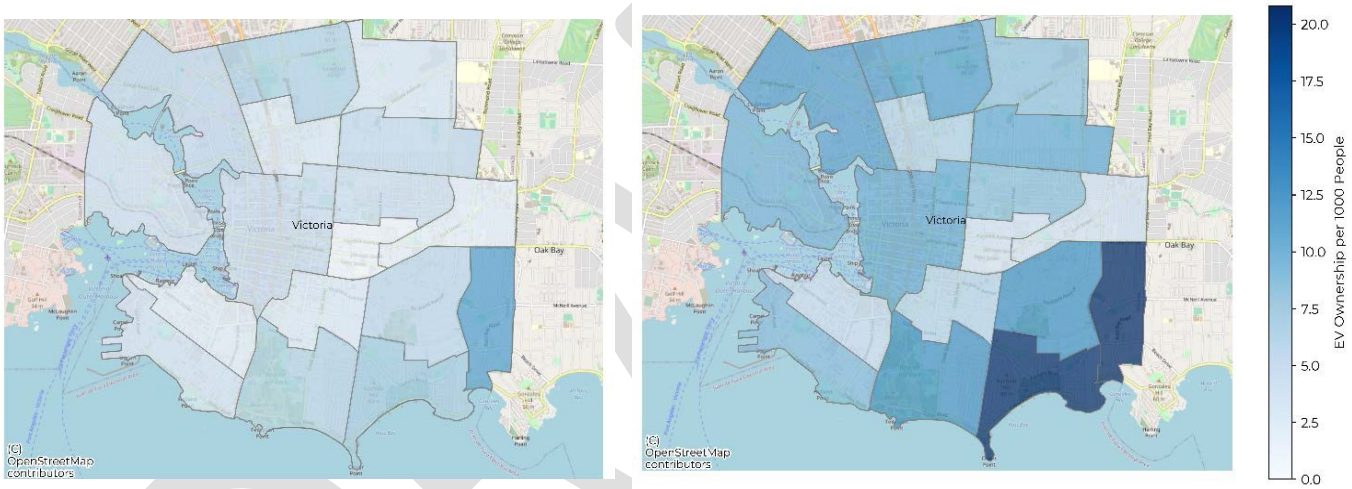


Figure 3 EV ownership per 1000 people by census tract in Victoria for 2018 (left) and 2020 (right).
Source: Government of British Columbia Ministry of Environment and Climate Change Strategy.

The early adopters of EVs in Victoria typically live in single-family dwellings, as shown in Figure 4. As discussed in the next section, as more Victorians explore the possibility of buying an EV to enjoy their reduced operating costs, environmental and other benefits, finding a place to plug in and charge up is going to become a growing challenge given that most residents live in multi-residential buildings.

[1] BC Ministry of Energy, Mines, and Low Carbon Innovation. (2020). EV vehicle registration data. *Personal communication, October 13, 2020.*

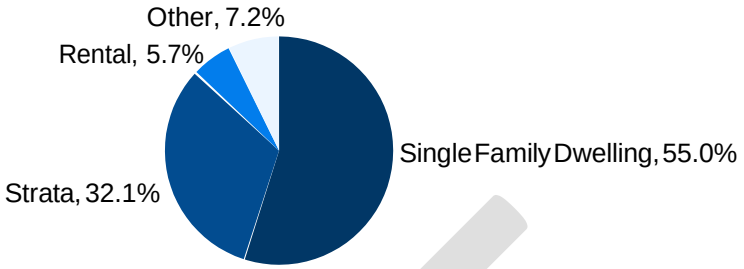
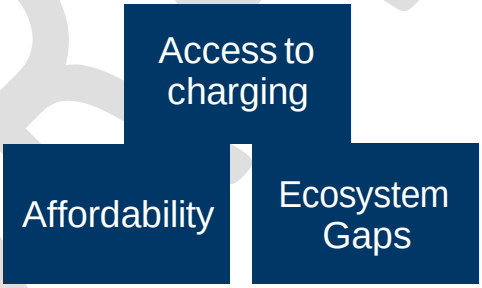


Figure 4 EV ownership by housing type (title) in Victoria.
Source: Ministry of Environment and Climate Change Strategy, 2020 (City of Victoria, 2020)

Victoria currently has more EVs on the road than anywhere else in the country. However, in the years ahead EV growth will be constrained by access to EV charging. Most Victorians live in multi-residential buildings and have limited options for charging at home. Public charging infrastructure can serve as a substitute for home charging access for many early adopters, however for some potential EV drivers, the reduced convenience and potentially higher cost of charging at a public station compared to charging at home overnight may dissuade them from buying an EV.

The City's primary focus for this Strategy is improving access to charging while also addressing affordability and ecosystem gaps.



Forecasting Future EVs

We used Dunsky's Electric Vehicle Adoption (EVA) model to explore different scenarios for EV adoption in the city and assess the impact of potential City specific policies and actions.

Based on a business-as-usual scenario, with no additional investment in charging and other policies and incentives, Victoria would fall well short of its target of having EVs represent 30% of vehicles in circulation by 2030 as shown in Figure 5. In the following section, we explore why that is, and what barriers need to be overcome to speed things up and reach Victoria's targets.

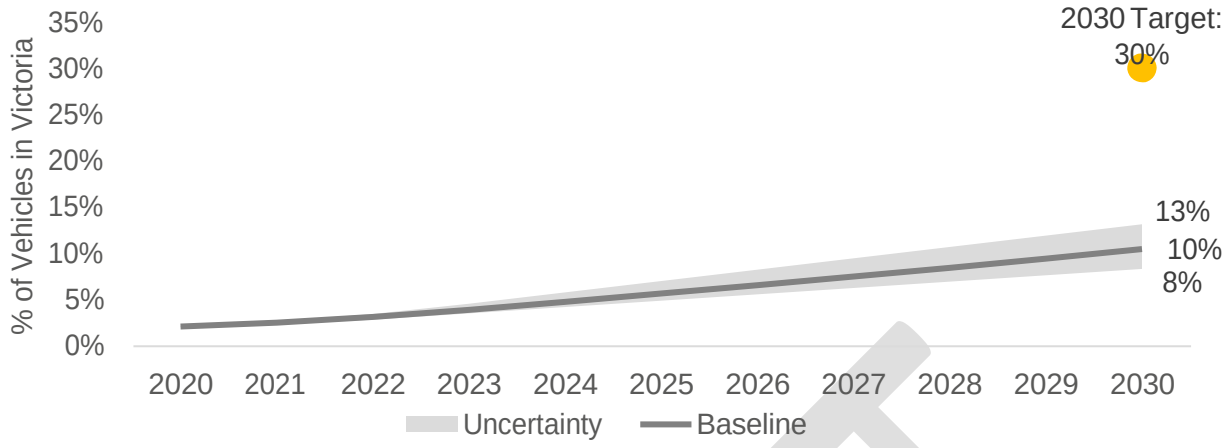


Figure 5 Victoria's business-as-usual EV adoption in comparison to the 2030 target

To develop this forecast, we populated the model with Victoria-specific housing and vehicle market data then calibrated it to historic EV uptake in Victoria. Once the model was calibrated, we developed forecasts that account for market constraints (including EV-specific barriers such as range limitations and access to charging infrastructure), forecasted market trends (such as EV model availability and prices) as well as market dynamics (incorporating technology diffusion theory and other market factors to determine rate of adoption and competition between vehicle types). The model includes assumptions regarding the growth of passenger vehicle ownership in the region and typical travel behaviour that depend on actions by the City and other local actors to support alternatives to personal vehicles.

We developed ranges around our forecasts for all scenarios, including the baseline. These ranges reflect uncertainty around factors that are influenced by market conditions that are outside of the City's control, including vehicle prices, vehicle model availability, electricity rates, and gasoline prices.

Additional details on the EVA model and our approach can be found in the accompanying Technical Report.

1. Access to Charging

Reliable and cost-effective access to EV charging, whether in homes, workplaces, or public locations is a critical component to enabling Victorians to choose, buy, and operate EVs. Unlike the traditional model of gas stations, EVs can 'fuel up' anywhere with the proper electrical access and charging infrastructure.

While public charging can serve the needs of many early owners, EV adoption for most drivers is best served by access to charging at home, which offers the highest level of convenience. In many jurisdictions, where EV owners live in single-family homes, this can be as simple as installing charging stations in driveways or garages. However, in Victoria, more than 80% of residents live in multi-residential buildings, where installing charging is much more complex and costly.

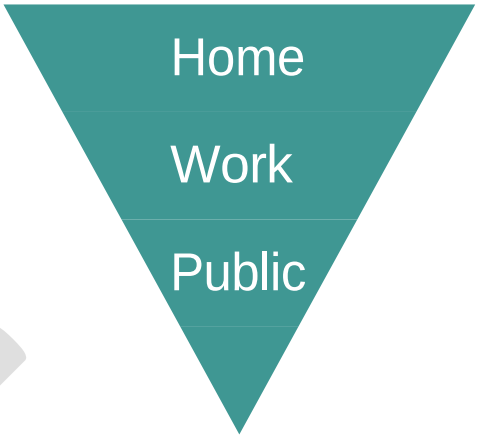


Figure 6 EV charging location preferences

Based on housing types across Victoria, only 22% of residences have the potential to easily install home charging. Figure 7 shows charging potential, overlayed with household income of each neighbourhood in Victoria. From an equity perspective, residents with lower income also have the most limited access to charging, pointing to the need for additional support.

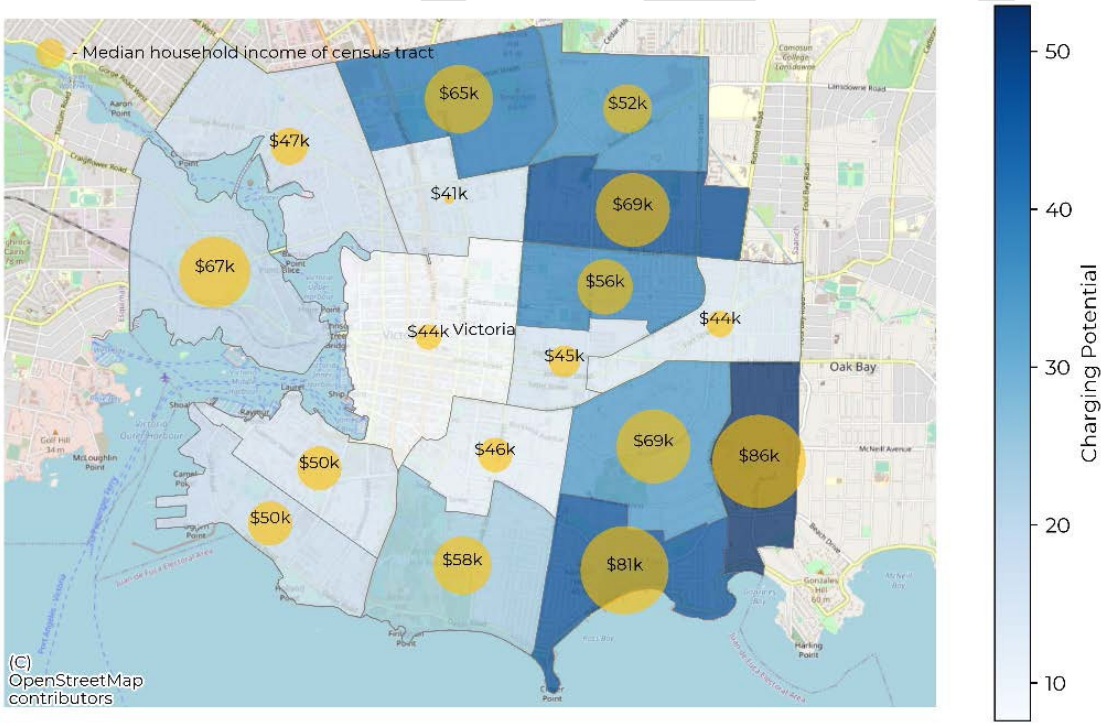


Figure 7 Home charging potential in Victoria, with median household income indicated by circle size. Source: Statistics Canada.

Charging at Home

To help future EV drivers plug in at home, on October 1, 2020 Victoria introduced a requirement that all parking stalls in *new* multi-residential buildings and certain commercial buildings are equipped to support charging infrastructure. As a result, reliable access to EV charging infrastructure will be provided for residents of the City's future multi-residential buildings.

What we heard

Stakeholders indicated that at-home charging is the most preferable option. Incentives, from the City and other levels of government, will be important to drive retrofits and should be designed for the long-term.

However, the same will not be true for residents in *existing* multi-residential buildings, where access to charging is a much bigger challenge. It is estimated that fewer than 5% of stalls in existing apartment buildings provide residents with access to EV charging. Retrofits are costly and stratas often have long and complex approvals processes and restrictions on how capital can be allocated to building improvements.

Current funding programs for existing buildings are primarily focussed on installing charging at a limited number of parking spots – typically in visitor parking. The B.C. Government provides an EV Charger Rebate program through *Clean BC Go Electric* which offers $2,000 for the installation of a Level 2 charging station designed for multiple users in existing multi-residential or commercial buildings with workplace parking. The City provides an additional $2,000 for residential buildings choosing to install this infrastructure.

Although adding EV charging to one or two parking stalls in the shared visitor parking of an existing building is an important first step, it has significant drawbacks:

Unreliable access to charging

- As more residents buy EVs, competition for limited charging spots will increase. Furthermore, parking in a shared stall typically means that you must move your vehicle after a certain number of hours. Most residents will want to be able to charge in their own parking stall before considering an EV.

Costly to homeowners

- The cost of retrofitting one or two parking stalls at a time, compared to the whole parking lot at once, is significantly more expensive on a per stall basis.

Complex approvals and lengthy timelines

- Getting approval from the building owner to add EV charging one parking stall at a time fast enough to support Victoria's 2030 targets is also a challenge.

Although the Province has introduced a rebate of up to $3,000 to prepare EV Ready plan and an implementation rebate of up to $600 per stall, current levels of funding and support are insufficient to provide access to charging in existing buildings to the same level as other building types. In addition, as many of the residents in these buildings are renters, additional support is required to ensure equitable access.

Charging at Work & On-the-Go

Even with retrofits to existing buildings, at home charging will not always be an option. Not all residents who own a vehicle have the space to park it at their home. Multi-residential buildings, both traditional multi-storey buildings and house conversions, may have limited onsite parking areas. In the future, more residences will be built without onsite parking, to encourage modal shift and more beautiful urban design.

For EV owners without access to charging at home, the next best option is to plug in at work, at public neighbourhood charging stations or fast charging hubs. In addition, on-street Level 2 and DCFC can support on-the-go charging, particularly for ride-hailing, taxis, and other high-mileage vehicles where limited infrastructure can slow EV adoption within these sectors. Access to these charging stations is also important for commuters into Victoria, who may want to charge up while at work or on-the-go.

What we heard

Stakeholders emphasized the importance of user experience for on-street charging to ensure charging access is fair and convenient. Car-sharing was considered a high-value use.

However, Victoria only has 74 Level 2 public charging stations to meet the needs of the close to 38,000 households (and even greater number of parking stalls) estimated to not have home charging access, and two fast charging station ports. The following map shows where they are, what type they are and the total number of stations in each area (Figure 8).

In addition, on-street Level 2 and DCFC can support on-the-go charging, particularly for ride-hailing, taxis, and other high-mileage vehicles where limited infrastructure can slow EV adoption within these sectors. Access to these charging stations is also important for commuters into Victoria, who may want to charge up while at work or on-the-go.

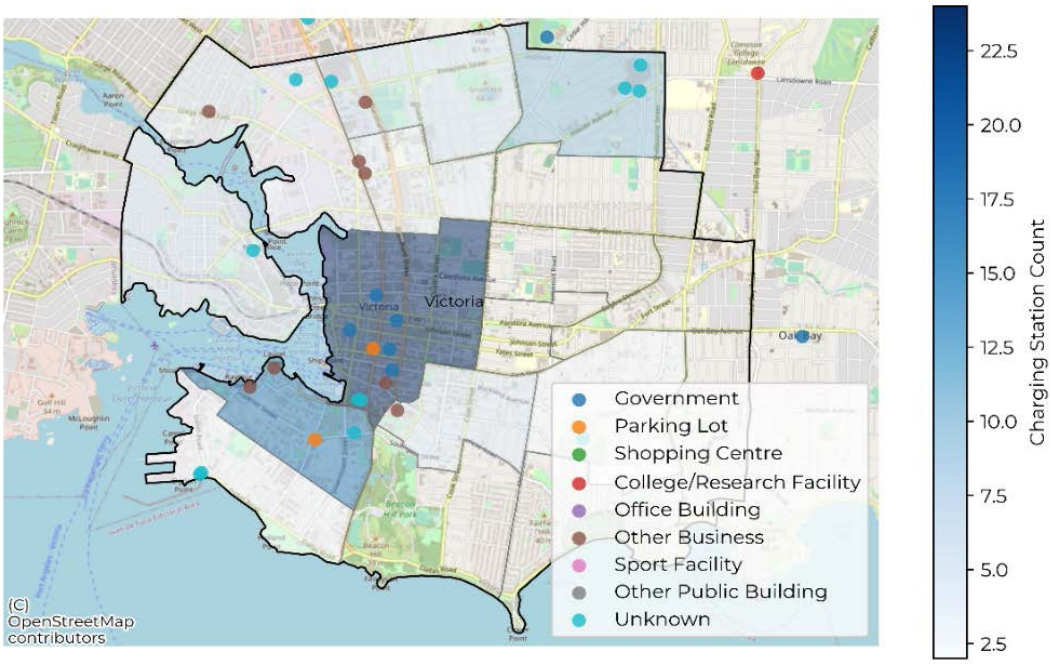


Figure 8 Public Level 2 charging stations by location type, with total number of charging stations shown with shading. In addition, a DCFC station has been installed at Store Street. Source: Natural Resources Canada, Statistics Canada.

Types of EV Chargers

- Level 2: charges a vehicle in 4 to 8 hours, and typically use in homes, workplaces, and public spaces.
- Direct Current Fast Charging (DCFC): charges a vehicle to 80% in 15 to 25 minutes and is typically used in public spaces and major roads.

Several of Victoria's charging stations are operated by the City, including 13 Level 2 chargers at five parkades (Figure 9), with most of the charging happening at the View Street and Broughton Street Parkades. The City recently opened its first on-street infrastructure with six new charging stations installed on Broad Street.

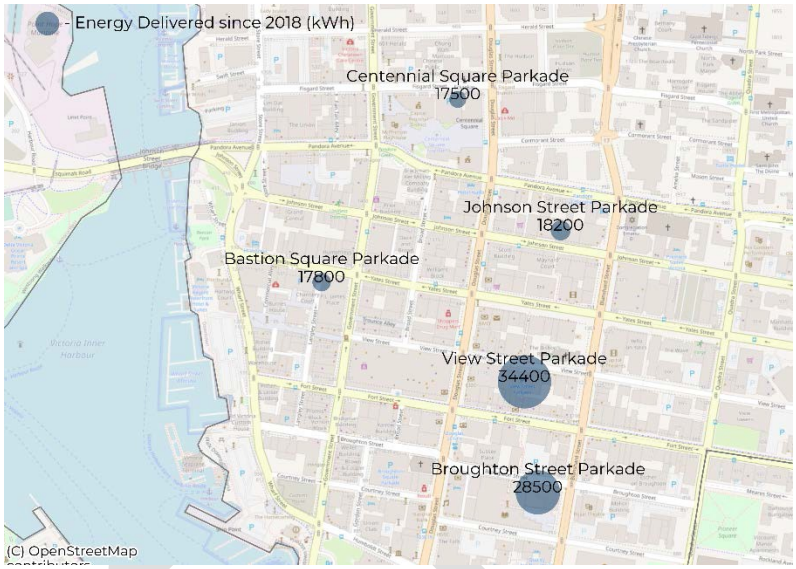


Figure 9 Map of City-operated EV Charging Stations with usage since 2018 indicated in the size of the circle. In addition, a DCFC station has been installed at Store Street. Source: City of Victoria, Charger Stats, Victoria, 2020.

EV Charging Challenges Snapshot

Hunting for a New Car and a Charge

Sophia loves living in Fernwood and her cozy apartment in a converted heritage home. Her work in health care requires her to commute to homes across the region so she relies on her car, which she typically parks just down the block. Her car has seen better days and she's looking for a new vehicle with better fuel efficiency to keep her monthly costs down. Sophia came across a second-hand EV in her research and thought that it would be such a great fit for her commute and budget. However, she knows she wouldn't be able to access the property driveway to install or access a charge. She started looking for nearby chargers and found the closest ones were all the way downtown. Without a closer charger, she put aside EV ideas and set her sights on ICE options only.

Workplace Connection

Miguel lives in Rockland and commutes to his tech job downtown. His early-morning schedule means that he chooses to take his car, though he will sometimes bike on nice days. Being tech-minded, he loves new technology and has been watching the rise of EVs. He is certainly considering one for his next car. He is doubtful that his older apartment building is equipped to install charging in the parkade. He would be just as happy to charge his at work. However, he's not seen EVs or signs of chargers in the office parkade and is uncertain if charging at work is a possibility.

Ready for a change, but not a charge

Ray and Michelle live in a three-storey strata building in James Bay. They love how they can explore and do most of their errands on foot. For work, Ray walks to his office, while Michelle commutes by bicycle. Their crossover SUV often sits in the parkade, but they use it for their monthly visits to Ray's elderly parents in Courtenay, and for exploring the coastline. Ray and Michelle don't feel great about polluting every time they drive and discussed getting an EV for a while now. They've viewed some interesting options at the dealers and were keen on buying one until they investigated the charging options. No one in their strata has an EV, and while the strata is supportive, the logistics of electrifying a parking spot for charging is daunting. The couple has pressed pause on getting an EV until they can figure out how to charge at home.

2. Affordability

In addition to access to charging, cost is commonly identified as barrier to EV ownership. Although EVs can cost more upfront than ICE vehicles, they typically have lower total cost of vehicle ownership due to reduced operations and maintenance costs. However, for many EV buyers, the upfront purchase cost is still a barrier even if the lifecycle costs are less.

The business case for owning an EV is more challenging in Victoria than in other jurisdictions. Although electric vehicles currently cost more upfront than internal combustion engine vehicles, electric vehicles often have lower total cost of vehicle ownership due to reduced operations and maintenance costs. Victorians drive relatively few kilometers per year, and therefore do not experience the same financial benefit of EV fuel cost savings and operations and maintenance as drivers who travel further.

Limited availability of second hand EVs also stands in the way of getting more affordable EVs on the road. This pool of vehicles will be small until the new vehicle stock turns over for second-hand markets, limiting the number of affordable options to the market.

Long wait times and limited vehicle choice are also a barrier for some potential EV buyers. B.C.'s zero emission vehicle act is expected to largely address this barrier; however, it will take some time before supply catches up with demand. For example, fewer than 1/3 of dealerships in BC had at least one EV available in inventory in Q1 2020[2]. If too few EVs are in stock at local dealerships, potential adopters have little choice in their purchase options and pricing and may opt for the readily available ICE vehicles.

3. Ecosystem Gaps

EV adoption can be inhibited by a lack of information as well as misinformation (e.g., knowledge of charging availability, knowledge of home charging options, range anxiety, lifecycle costs, model availability, vehicle stock at local dealers, and model features). Consumers may not have enough awareness, confidence, or understanding of EVs to be comfortable deciding to switch.

The provincial and federal governments are developing educational materials and programs, alongside financial incentives, to support EV adoption in line with their zero-emission vehicle goals. These efforts are important to build momentum for vehicle purchasing and charging, but local action is required to help residents navigate the process to access home or neighbourhood charging. Local organizations, such as EV clubs and regional non-profits, offer educational materials to promote zero-emission transportation. Similarly, EV manufacturers and technology companies are developing marketing materials to promote their products in the marketplace.

Despite current programs and tools in place, a much broader effort is required to reach more potential EV drivers and accelerate the pace of adoption. A large gap remains in terms of local charging logistics and

[2] Dunsky (2020). *Plug-in Electric Vehicle Availability: Estimating PEV Sales Inventories in Canada: Q12020 Update*. Available online: https://www.dunsky.com/wp-content/uploads/2020/07/DunskyZEVAvailabilityReport_Availability_20200805.pdf

information. Residents, particularly for those without a private driveway or garage, can have difficulty understanding how and where to charge their EV.

The Path Forward

Addressing EV adoption barriers requires a comprehensive solution tailored to Victoria. Our modelling shows that strategic investment in charging infrastructure is the key to accelerating adoption, along with targeted financial incentives and building a supportive EV Ecosystem.

1. Invest in EV charging

The City of Victoria can play a significant strategic role in supporting EV adoption by investing in charging infrastructure. The municipality's role in development, parking, and urban infrastructure design and investment position the City in a prominent location to directly influence EV adoption behaviour.

We used Dunsky's Electric Vehicle Adoption model, local data, stakeholder feedback, and market trends to assess the impact of various City actions to reduce barriers and accelerate EV adoption. Future scenarios were iterated and optimized to produce a suite of recommended actions that are the most cost-effective combination to reach Victoria's 2030 goal.

To remove the infrastructure barriers that will prevent the City reaching its renewable transportation target, a total investment of $60 M in charging infrastructure is forecast to be required between 2022 and 2030, with the City's recommended contribution totaling $15 M. An annual overview of City contributions by investment area are presented in Figure 10.

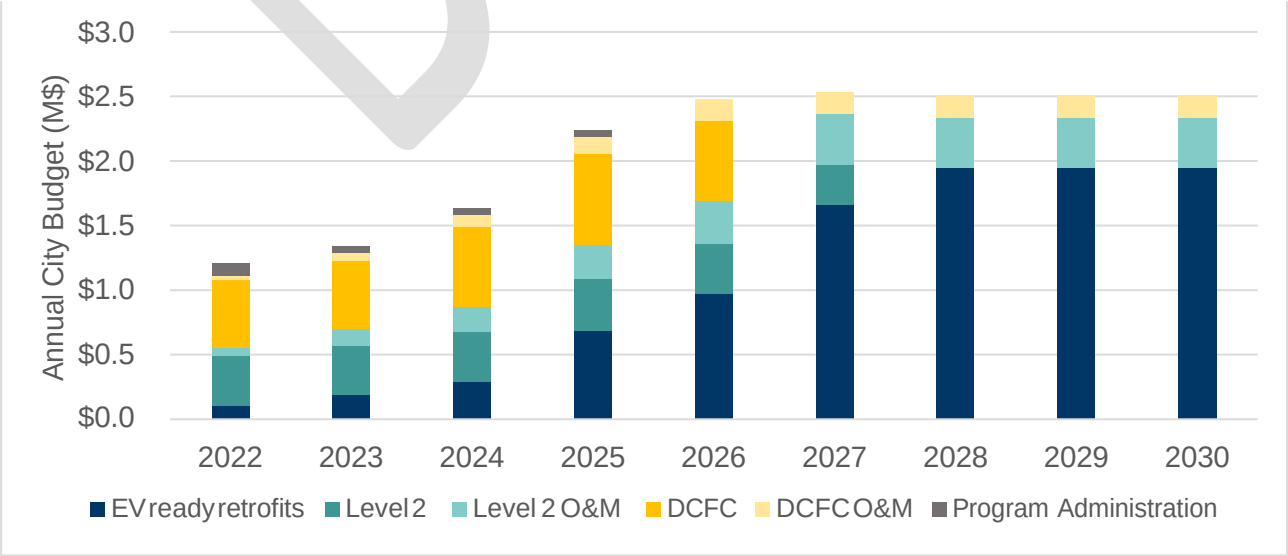


Figure 10 Annual City budget by investment area, 2022-2030

The figure also includes budgets for operations and maintenance (O&M) of chargers and program administration. We assume program administration to cost $100,000 for the first year, and $50,000 for the next four years representing ongoing implementation costs. We do not include administration costs for years 2026-2030 – this budget should be developed after analyzing actual spend over the initial program years. O&M for level 2 is assumed to be $600/port/year and $5,000/port/year for DCFC.

The corresponding number of charging ports and EV-Ready retrofits required in each year is outlined in Table 1.

Table 1 Summary of the number of ports and retrofits completed annually.

	2022	2023	2024	2025	2026	2027	2028	2029	2030
DCFC ports	6	6	7	8	7	0	0	0	0
Level 2 ports	110	111	111	116	111	91	0	0	0
EV-Ready Retrofit stalls	445	772	1,219	2,844	4,062	6,906	8,125	8,125	8,125

To fully address market barriers to adoption, all infrastructure interventions outlined above need to be deployed. No one investment area will reach the 2030 target in isolation and, in fact, the infrastructure investments alone are not expected to achieve the City's ambitious goal. To achieve the 2030 target, financial incentives in line with what is currently available will also be needed through to 2030. With these investments and incentives, EV adoption should reach 17% to 31%, depending on market conditions, as shown in Figure 11.

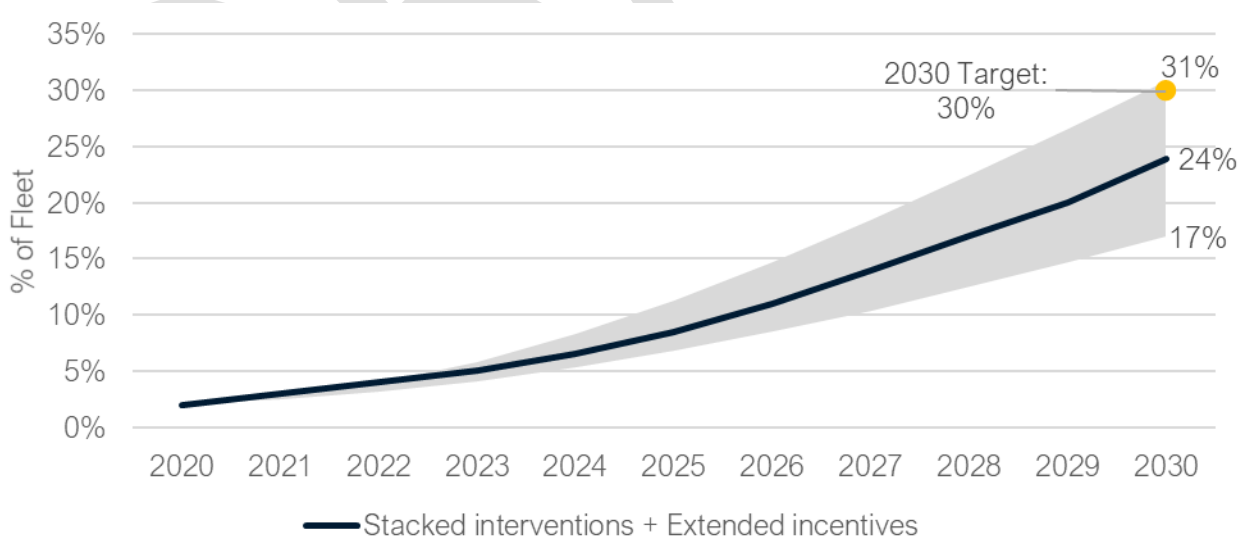


Figure 11 Electric vehicles as a percentage of total fleet following infrastructure investments and extended incentives

2022-2025 Budget – Focus on Public Charging

Although charging at home is the preferred option for most drivers, ramping up EV ready retrofits in existing multi-residential buildings where most Victorians live will take time. New programs and funding initiatives will need to be developed and industry capacity and expertise increased. In the interim, the City can support EV drivers by expanding access to public charging. Therefore, initial deployments and City spending focus on public charging, with most Level 2 and DCFC charger installations planned for the first half of the decade. A summary of the installations and retrofits in this period are outlined in Figure 12.

Figure 12: Summary of City investment 2022-2025

DCFC infrastructure is a key focus for the first five years of the investment plan. DCFC public charging infrastructure provides rapid, on-the-go charging residents without at-home charging. These rapid charging stalls can serve a large number of vehicles and a broad range of public needs. They can centre around local amenities that align with residents' regular travel behaviour and connection with community amenities. By creating a hub where people naturally gather, DCFC infrastructure can enhance EV adoption. For long-distance travel by Victorians, commuters and tourists, DCFC can provide fast charging in high-traffic locations, such as major roads or village centres.

What we heard

There was support for public charging locations to align with community hubs (e.g., schools, grocery stores, parks) that would be a natural fit with typical in-City travel behaviour or accessing underutilized spaces. These spaces were seen to be used as 'mobility hubs', not simply EV stations.

DCFC installations are spread across five years. A staged approach to installations helps to ensure charger roll-out keeps pace with EV adoption by ramping up over time as EV fleets grow. This also avoids overbuilding and, as a result, low levels of charger utilization.

The need for the City to invest in public charging infrastructure is more certain in the first four years given ongoing barriers to private sector investment. Because some portion of the charging infrastructure would be installed in advance of market needs in order to encourage adoption of EVs, there is potential for lower utilization in early years. This results in an unattractive business case for private market actors, and a low likelihood that chargers will be installed without government support.

The annual City budget for charging infrastructure for 2022 to 2025 is provided in Table 2.

Table 2: City Annual Budget 2022 - 2025

	2022	2023	2024	2025
EV Ready Retrofits	$107,000	$185,000	$293,000	$683,000
Level 2	$381,000	$384,000	$384,000	$402,000
DCFC	$525,000	$525,000	$613,000	$700,000
Program Administration	$100,000	$50,000	$50,000	$50,000
Level 2 O&M	$66,000	$133,000	$199,000	$269,000
DCFC O&M	$30,000	$60,000	$95,000	$135,000
Total	$1,209,000	$1,337,000	$1,633,000	$2,238,000

Values are rounded to nearest $1,000

Plugging-in at Work to Unplug on the Weekend

Miguel is leaving the office for a weekend away in Sooke Potholes Provincial Park. He was able to plug into a Level 2 charger in the office parkade. He now has a full charge and can take off to for some hiking and camping without having to worry about charging again until he's back to the office on Monday.

Happy to find a Hub

Sophia was walking home with her groceries and was passing by Victoria High School. Near Fernwood Square, she spotted two EVs plugged into a DCFC station with four spots. The sign highlighted how quickly the station could charge an EV. She realized she could charge up for a few days while she was waiting for her takeout order, or for the full week while in her yoga class. With a reliable fast-charging station so close to her apartment, she decided she would put that second-hand EV back on the test drive list.

2026-2030 Budget – Ramp up EV Ready Retrofits

By 2026, there will be growing demand from drivers to plug in at home and the industry will have had time to ramp up and build capacity. Therefore, EV-ready retrofits are the primary focus of investment for this period (Figure 13).

Figure 13: Summary of City Investment 2026 - 2030

In this study, we assumed that 90% of parking stalls in existing buildings would require retrofits before chargers could be installed – an estimated 40,600 stalls in total by 2030. If we assume, for illustrative purposes, that the average multi-residential building has five storeys and six units per storey, 40,600 stalls equates to approximately 2,000 multi-residential buildings over 10 years.

The most cost-effective way to accomplish these updates, according to recent analysis by AES Engineering, is to perform a comprehensive retrofit where energized circuits are provided to every parking stall during a single renovation. Once this one renovation is complete, Level 2 EV charging stations can be easily installed by building or unit owners at any stall when required at a future date.

EVA modeling suggests that this approach is scalable to enable EV adoption among most multi-unit building residents with access to parking. Investment by the City in EV ready retrofits is required to fill gaps in provincial and federal funding and ensure equitable access to charging across different housing types and different types of residents (renters, low-income etc.).

Based on anticipated funding programs from other levels of government and expected demand from building owners, we estimate that a City-funded top-up of up to 20% of retrofit costs would be sufficient to generate strong retrofit uptake depending on the shortfall in provincial or federal support. The investment recommended represents the costs associated with retrofitting all stalls that do not have the appropriate electrical infrastructure across Victoria's multi-residential buildings.

This investment would enable home charging access for 91% of Victorians, compared to today's 22%.

The EV market is evolving rapidly, so the total required City investment is less certain in the later half of the decade. Program and market progress should be assessed on an ongoing basis to ensure City spending, including for program administration, covers unmet needs in the market.

Table 3: City Annual Budget 2026 - 2030

		2026	2027	2028	2029	2030
City Annual Budget	EV Ready Retrofits	$975,000	$1,657,000	$1,950,000	$1,950,000	$1,950,000
	Level 2	$384,000	$315,000	$0	$0	$0
	DCFC	$613,000	$0	$0	$0	$0
	Program Administration	TBD	TBD	TBD	TBD	TBD
	Level 2 O&M	$335,000	$390,000	$390,000	$390,000	$390,000
	DCFC O&M	$170,000	$170,000	$170,000	$170,000	$170,000
	Total	$2,477,000	$2,532,000	$2,510,000	$2.510000	$2.510,000

Values are rounded to nearest $1,000

Energizing the Board

Ray and Michelle left the strata meeting jubilant because the residents voted to move ahead on the EV Readiness retrofits. Some residents were hesitant due to the price tag, but the costs made sense with the incentives and City top-ups, as well as the property value considerations. Plus, it is far more cost effective to energize all the stalls at once, rather than for the handful of residents that have or want to purchase EVs. Once the work is complete, Ray and Michelle will be able to install the charger at their stall and plug-in at home.

Financial and Policy Support

The City can support the deployment of charging infrastructure through investment and policy tools to ensure effective and equitable charging access.

For charging at work and on-the-go, the City should:

Provide financial support by:

- DCFC Hubs, mostly centred on current City amenities: 34 ports
- On-Street Level 2 (powered from streetlight infrastructure and stand-alone): 125 ports
- Comprehensive retrofits for Level 2 infrastructure in City-owned parkades and parking lots: 125 ports
- Exploring partnerships to locate City-owned and -operated infrastructure on private property, as well as private infrastructure located on City property.
- Investing in EV infrastructure deployment in existing workplace and fleet parking areas (e.g. City-owned parkades).

City-owned Level 2 infrastructure should be distributed throughout the city, taking into account equitable access as well as the following placement criteria:

- Proximity of available electrical power
- Close to retail
- Close to multi-family buildings
- Close to parks
- Visibility and prominence
- Ease of access
- 24/7/365 availability
- Safety and security

Provide policy support by:

- Instituting requirements for a portion of non-residential parking to be EV Ready (20-50% for workplace parking, 10-20% for visitor parking).
- Allocating dedicated stalls in City-owned parkades for car-share vehicles to support shared electric vehicle choices.

Every day, almost 38,000 people commute to Victoria for work, and 24,000 Victoria residents commute within the City. Workplace charging is a valuable resource because it acts as a reliable alternative to home and public charging. Residents who regularly commute using a personal vehicle could opt to charge during their working hours, rather than at home. In commuter-focused analysis, Victoria is estimated to need 400 of the recommended 650 Level 2 ports installed in City-owned parkades to meet the needs of those commuting from Saanich, Langford, Esquimalt, Oak Bay, Colwood, Central Saanich, and View Royal.

Recommended initiatives:

Invest in public Level 2 on-street and in parking facilities: $2.25 M for 650 ports
Invest in public DCFC hubs: $3 M for 34 ports
Expand *EV Readiness in New Construction* by-law to cover additional commercial buildings.

For charging at home, the City should:

Provide financial support by:

- Offering top-up incentives, as well as education on additional financial and technical supports available from other levels of government, for comprehensive retrofits to existing multi-residential buildings. Early adopters of the retrofit program are likely to be strata buildings. As the second-hand EV market matures, the City should focus its efforts on rental properties to support EV adoption for lower income earners.
- Continuing the existing top-up incentives to the *Clean BC Go Electric* funding for one-at-a-time installations in multi-residential buildings while the comprehensive retrofit program ramps up.

Provide policy support by:

- Adopting stronger EV Readiness requirements for workplace and visitor parking in new developments, to complement the City's existing 100% EV Ready residential parking requirements.
- Developing pathways to allow public on-street Level 2 charging that is deployed and managed by private residences. These efforts could include lease agreements, access safety guidelines (e.g. City of Vancouver's curbside EV charging guidelines) or revisions to other applicable by-laws.

Recommended initiatives:

Invest in residential EV Ready retrofits: $9.75 M for 46,000 stalls
Develop Comprehensive EV Ready Retrofit pilot to provide top-up incentives.
Continue existing top-up incentives for one-at-a-time retrofits in multi-residential buildings while the comprehensive program ramps up.
Revise parking regulations to allow public on-street Level 2 charging deployed and managed by private residences where appropriate.

2. Fill Gaps in EV Incentives

In addition to investing in charging infrastructure to meet its Climate Leadership Plan target, the City may choose to provide financial incentives to EV drivers if levels of EV adoption are not accelerating fast enough or if current provincial and federal incentives start to drop off. Provincial and federal financial supports play a key role in supporting EV purchases, and work in combination with City efforts to support EV charging to residents. However, if these incentives diminish in the future, our analysis identified that it would be difficult to meet the City's ambitious adoption target.

Modelling shows that the current level of incentives will need to be maintained for the 2030 target to be met. Incentives could be offered by the City through several different approaches such as in parking regulations or zero-emission zones.

Recommended initiative:

If current provincial and federal incentives are reduced or removed, explore options for City-led incentives, such as zero emissions zones and parking regulations, to maintain the overall cost-benefit of EV ownership.

3. Build a Supportive EV Ecosystem

The City has an important role in influencing external players and aligning its work to develop a supportive environment for EV adoption.

Develop a Municipal EV Charging Program

It is recommended that the City establish EV charging as a municipal program to roll out the activities outlined in this Strategy. This program would require appropriate City Staff allocation and funding and would deploy City-owned and operated infrastructure for the public and for its own employees and fleets.

Annual or bi-annual usage reports for City chargers should be prepared and reviewed, with the results used to validate or update installation plans.

What we heard

There was strong support for City-owned infrastructure, to ensure equitable access, leverage existing assets, and enhance EV visibility. Stakeholders recognized that significant investment and scale are required to ensure equity.

Recommended initiatives:

Develop EV Charging as a municipal program to support and facilitate adoption.
Monitor City charging station usage and adjust implementation plans based on usage or geographic trends.

Enable Private Investment

The private sector is a valuable partner for accelerating EV infrastructure installation, whether through direct investment in EV infrastructure deployment, leading the operation and maintenance of EV charging, or by providing valuable host sites for deployment by other actors.

While business models to support private investment in EV infrastructure are still emerging, the City can help to facilitate this investment through partnerships and maximize overall deployment. The City should explore innovative pilot and partnership opportunities to deploy infrastructure on both private and City-owned property. These partnerships can reduce the cost and risk of infrastructure deployment to the City for sites with strong business cases, leaving the City to focus on the gaps where the private sector is unlikely to deploy.

To facilitate private sector investment on City property, the City should identify appropriate locations to install on-street charging infrastructure through a detailed analysis, considering competing demands for parking, future plans for bike infrastructure and other improvements, future plans for utilities and civil works, accessibility, equity considerations, and other factors. Similarly, the City should identify key locations for public EV charging that exist on private land and explore partnership opportunities.

The City should also determine contractual structure for these partnerships. For private operators on City-owned sites, agreement should define long-term (5-10 year) control and considerations for excellent customer experience (e.g., speed and quality of repairs, minimum number of stalls).

Recommended initiative:
Identify appropriate locations for private sector investment in on-street charging and develop contractual framework.

Build Capacity and Expand Education Initiatives

Many consumers and businesses are unaware, misinformed, or uncomfortable with EVs, charging infrastructure, incentive programs. On the other hand, there are also many who residents interested in actively promoting an EV transition. An organized network of residents, supported and engaged by the City, would help provide an avenue for engagement.

What we heard

EV infrastructure deployment should go beyond installation. The City's EV service should be oriented to customer education and experience.

We recommend that the City play a role in electric mobility transportation by acting as a centralized information hub to support residents and business preparing for or deploying EV infrastructure. The City could leverage the strong existing network of engaged residents and association resources. The City could also utilize *Go Electric BC* and *Plugin BC* as a guide for residents and business, while assessing and filling any local information gaps.

We recommend the creation of an EV industry stakeholder network that would support the implementation of this Strategy and ensure alignment within the local market. Working with local dealerships and EV charging infrastructure companies can ensure the availability of models, materials, and expertise needed to support adoption.

Recommended initiatives:

Develop educational materials for comprehensive multi-unit building retrofits and engage with multi-residential building residents, owners and managers to facilitate retrofits.
Develop educational materials for commercial buildings and workplaces to support retrofits.
Work with local dealerships and EV charging infrastructure companies to ensure the availability of models, materials, and expertise needed to support adoption.

Advocate for Supportive Policies

While the federal and provincial governments have strong EV programs and targets in place, the City has committed to pursuing higher levels of EV adoption in support of meeting its climate commitments. This position was further consolidated with the approval of Climate Emergency Actions in 2019. Advocacy to other orders of government is a key action in the Climate Leadership Plan and of particular value in support of the EV strategy. The City should actively seek to influence policies outside the scope of municipal authority to drive or support EV adoption.

Requirements and incentives provided by the Provincial and Federal governments can play a large role in advancing the EV market in the City. It is recommended that the City advocate for Provincial and Federal policies to encourage the transition to EVs, including:

- rebates for new and used vehicles
- incentives for comprehensive EV Ready retrofits
- non-financial incentives for EV drivers (e.g. HOV lane access on provincial highways)
- regional mobility pricing that favour EVs
- provincial Right-to-Charge legislation to provide appropriate timelines considering individual or comprehensive retrofits
- Strengthening the provincial zero emission vehicle act and/or introducing a national mandate

At the regional level, the City should advocate for EV supportive policies, as well as play a role in supporting the coordination and alignment of regional efforts to invest in infrastructure.

Similarly, we recommend that the City advocate and work with the province's electricity and natural gas utilities to encourage adoption. The City should encourage beneficial policies (e.g. demand charge reform) and continued or enhanced incentives. The City should encourage the development of electrical resource education and availability of local electrical resource information. This information sharing could be particularly useful for City or private implementation of on-street (streetlight) charging infrastructure.

Recommended initiative:

Advocate utilities, regional, provincial, and federal governments to maintain and expand supportive incentives and policies.

Strategy Map

The City of Victoria's EV Strategy is summarized in the following strategy map. Each objective is linked to a local opportunity area and specific recommended initiatives for the City to act on. These outcomes are the result of the local and best-practice research, a thoughtful stakeholder engagement process, and tailored modeling and analysis.

	OBJECTIVES *To achieve the 2030 target*	OPPORTUNITY AREA *To address barriers and enable adoption*	RECOMMENDED INITIATIVES *City actions designed to accelerate adoption*
EV Strategy	Expand access to EV Charging	Invest in City-owned charging infrastructure	1. Invest in public Level 2 on-street and in parking facilities: $2.25 M for 650 ports a. 2022-2025: $1.55 M b. 2026-2030: $0.70 M 2. Invest in public DCFC hubs: $3 M for 34 ports a. 2022-2025: $2.4 M b. 2026-2030: $0.6 M 3. Invest in residential EV Ready retrofits: $9.75 M for 46,000 stalls a. 2022-2025: $1.27 M b. 2026-2030: $8.48 M *In addition: $1M for O&M in 2022-2025 and $2.7M in 2026-2030 and $250,000 for program administration, education and capacity building, and program monitoring and evaluation in 2022-2025.*
		Expand EV Charging Policies	4. Develop Comprehensive EV Ready Retrofit pilot to provide top-up incentives. 5. Continue existing top-up incentives for one-at-a-time retrofits in multi-residential buildings while the comprehensive retrofit program ramps up. 6. Expand *EV Readiness in New Construction* by-law to cover additional commercial buildings. 7. Revise parking regulations to allow public on-street Level 2 charging deployed and managed by private residences where appropriate. 8. Develop EV Charging as a municipal program to support and facilitate adoption. 9. Identify appropriate locations for private sector investment in on-street charging and develop contractual framework. 10. Advocate utilities, regional, provincial, and federal governments to maintain and expand supportive incentives and policies.
	Monitor Affordability	Introduce targeted financial incentives, if needed	11. If current provincial and federal incentives are reduced or removed, explore options for City-led incentives, such as zero emissions zones and parking regulations, to maintain the overall cost-benefit of EV ownership.
	Build Victoria's EV Ecosystem	Build Local Awareness, Capacity and Market	12. Develop educational materials for comprehensive multi-unit building retrofits and engage with multi-residential building residents, owners and managers to facilitate retrofits. 13. Develop educational materials for commercial buildings and workplaces to support retrofits. 14. Work with local dealerships and EV charging infrastructure companies to ensure the availability of models, materials, and expertise needed to support adoption.
	Evolve with Adoption	Monitor, Evaluate and Adjust	Monitor City charging station usage and adjust implementation plans based on usage or geographic trends.

Appendix A

To ensure the Strategy is grounded in the local context, a wide selection of stakeholders were consulted in October 2020. Stakeholder feedback was collected in a series of three workshops: One workshop was held with City staff and two workshops were held for external stakeholders.

The objective of these workshops was to:

- Gain staff perspectives on the local context for EVs and potential opportunities, roadblocks, and key considerations for implementation;
- Gain community, business, and industry perspectives on the local context for EVs and potential opportunities, roadblocks, and key considerations for implementation; and
- Share preliminary EV adoption modeling scenarios and gain insight into the likely impacts of those scenarios and understand which scenarios are most realistic and achievable.

	External Workshop #1	External workshop #2
Organizations represented	1. BC Sustainable Energy Association 2. Bluebird Cabs 3. Capital Regional District 4. Current Taxi 5. District of Saanich 6. Downtown Victoria Business Association 7. DriveElectricVictoria 8. Electrify Canada 9. FleetCarma 10. Flo/AddEnergie 11. B.C. Ministry of Environment – Climate Action Secretariat 12. Grok Energy 13. Island Health 14. Kia 15. Leading Ahead Energy 16. Modo 17. Mogile Tech / ChargeHub 18. Motorize 19. New Car Dealers Association of BC 20. Natural Resource Canada 21. PetroCanada/Suncor 22. Porsche Canada 23. SWTCH EV 24. Toyota 25. University of Victoria 26. Urban Development Institute - Capital Region 27. Vancouver Island Strata Owners Association 28. Victoria Chamber of Commerce 29. Victoria EV Association	1. Victoria EV Association 2. SWTCH EV 3. BC Sustainable Energy Association 4. Capital Regional District 5. DriveElectricVictoria 6. FleetCarma 7. Greenlots 8. Grok Energy 9. Modo 10. Motorize 11. Vancouver Island Strata Owners Association

dunsky

Electric Vehicle Strategy – Technical Report

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Introduction

Context

In 2016, the City of Victoria Council committed to reducing community greenhouse gas emissions by 80 percent from 2007 levels by 2050 and in March 2019, declared a climate emergency. The pathway to achieving these reductions was outlined in the 2018 Climate Leadership Plan (the Plan). This ambitious goal requires a transformation in the way the City uses and manages energy in five major City sectors: buildings, mobility, waste management, municipal operations, and adaptation.

Transportation is currently responsible for 40 percent of community emissions, requiring multi-pronged approach to reduce emissions. Along with active and public transportation and land use goals, the Plan identifies that the remaining personal transportation vehicles should be electrified. Specifically, the City set the following target:

By 2030, renewable energy powers 30 percent of passenger vehicles registered in Victoria, and 100 percent of passenger vehicles are renewably powered by 2050.

The City of Victoria engaged Dunsky Energy Consulting, with partner AES Engineering, to develop an Electric Vehicle Strategy as a roadmap to realizing this ambitious goal. To develop a realistic and made-for-Victoria plan, a thorough analysis of the current conditions and the strategic infrastructure, investment, and policies required to reach the 2030 passenger vehicle target through electrification. This report summarizes the results of these analyses, including the current state of the local EV market, infrastructure best practices and levers for action for accelerating adoption, and the modeling of different adoption scenarios based on infrastructure and incentive interventions. Key findings and recommendations are summarised in the EV Strategy, which has been developed in parallel and in combination with this report.

Background

Electric vehicles (EVs) are currently the most readily available, energy efficient and cost effective zero emission passenger vehicle and, therefore, have been identified by the City as the core focus for the Strategy. Other zero emissions vehicle technologies, such as hydrogen fuel cell, are at an earlier stage of market-readiness. This analysis covers both plug-in hybrid EVs (PHEVs) and battery EVs (BEVs).

The primary focus of this analysis is on the role of charging infrastructure in enabling EV adoption, a critical area where local governments can have significant influence. The most convenient place to charge an EV is at home, and any steps the City can take to increase home charging access can help to ensure that Victoria residents see EVs as an attractive alternative to gas-powered vehicles. Additional charging infrastructure at workplaces and public locations can support those without access at home while affording all EV drivers greater flexibility to travel longer distances. Through investment and policy, the City can play an important role in improving access to charging infrastructure for residents. Other policies and incentives to build a supportive EV ecosystem and market are also addressed.

Charging infrastructure for PHEVs and BEVs falls into three common types of charging infrastructure: Level 1 and Level 2 (both using AC) and Direct Current Fast Charging (or DCFC). Government support is

typically targeted towards the installation of Level 2 and direct current fast charger (DCFC) infrastructure, due to their faster charging and higher cost. These two charging types are the focus of this analysis. An overview of the three types is presented in Table 1.

Table 1 Common EV charging infrastructure types and characteristics

	Level 1 (AC)	Level 2 (AC)	DCFC
Typical Output	1.5 kW (120 Volts)	7.2 kW (240 Volts)	50 kW – 350 kW (400 to 800 Volts)
Range Added per Hour (approximate)	8 km	40 km	300+ km
Equipment and installation costs	$150 - $1,500[1]	$2,000 - $15,000	$75,000 - $250,000
Typical use locations	Some homes, workplaces, public spaces	Homes, workplaces, public spaces	Major corridors, public spaces
Used by	BEV and PHEV	BEV and PHEV	Primarily BEVs

EV charging can be grouped by charging type, and further grouped by purpose (e.g., residential, workplace, "on the go" or opportunity charging) and location (e.g. private and public parking lots and on-street). For each charging type, Figure 1 shows the most appropriate purpose and locations.

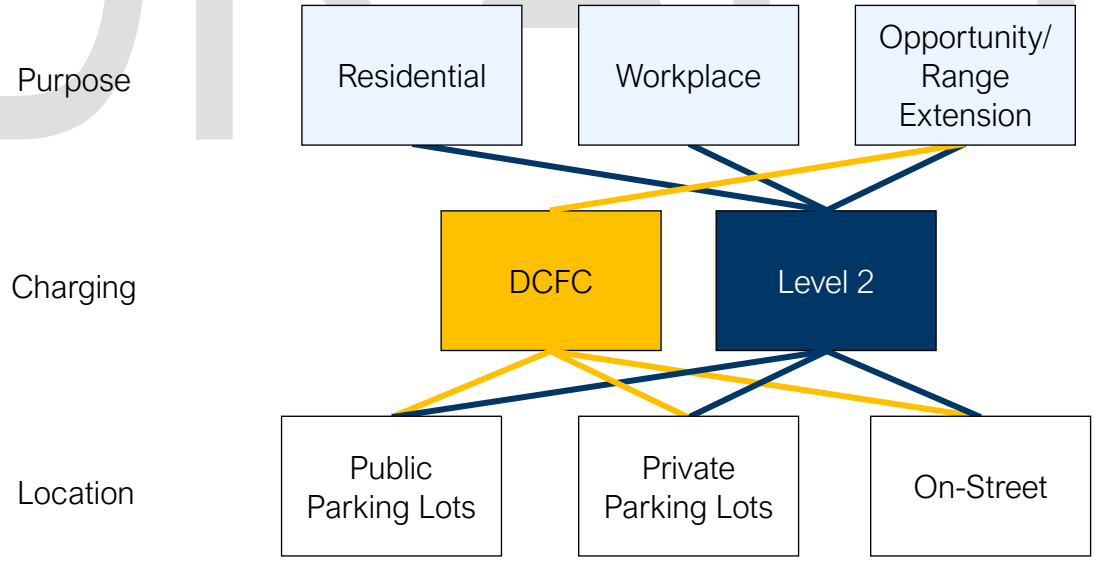

Figure 1: Location, types, and purposes of EV charging.

[1] While a standard 120 V AC outlet can be used, an EV driver will need to provide their own portable charging infrastructure to make the connection possible. Alternatively, Level 1 charging can refer to a permanently affixed 120 Volt charging station that can be used by EVs without requiring additional equipment.

The type of charging and location should be chosen with careful consideration of the purpose of that charging, and this is reflected in the leading practices reviewed in this report. For example, DCFC is an appropriate type of charging for opportunity charging and range extension because it is fast and can be used by people on-the-go. For residential and workplace applications, DCFC is both inconvenient (the driver needs to return to their car to move it shortly after parking) and expensive to build; therefore, it is more appropriate to focus on Level 2 charging in these contexts.

In addition, the demand for each of workplace, residential, and opportunity charging will depend on the availability of charging for each of the other purposes (e.g. with more residential charging, the demand for workplace charging will decrease; conversely, a lack of residential charging access can be partially mitigated by access to workplace and opportunity charging). These themes are further explored in the Scenario Assessment and EV Strategy.

Objective & Structure of this Report

The objective of this report is to provide the technical details and context for the EV Strategy. The Strategy outlines the optimized plan for investment and supports required to achieve the City's 2030 target. This technical report is the technical companion to the public-facing document.

This report is structured into the following three sections:

1. Condition Assessment: an overview of the current EV adoption context in Victoria.
2. Leading Practices Review: summary of approaches to accelerate adoption in top EV jurisdictions.
3. Scenario Analysis: EV Adoption (EVA) modeling results of adoption scenarios, including the baseline and optimized scenarios.

Together, this analysis was integrated and iterated to produce the optimal scenario and recommendations within the EV Strategy.

This section reviews the current state of electric vehicle (EV) adoption in Victoria, as well as access to EV charging infrastructure both at home and in public locations, including charging stations operated by the City of Victoria.

Key Insights

- Victoria's EV adoption rates are above the provincial average.
- Despite strong adoption, current trends will not reach the City's 2030 target.
- The majority of current EV owners live in single-family dwelling, whereas the majority of Victorians live in multi-residential buildings.

1. EV Adoption

The Victoria region has the highest percentage of EV sales in Canada. Early data from Statistics Canada from the first half of 2020 shows that 13.4% of new vehicle registrations were EVs in the Victoria region [1]. Within the City of Victoria, there were 825 EVs on the road in 2020[2], representing approximately 12% of new vehicles and nearly 2% of all vehicles registered in Victoria[2].[3]

Despite Victoria's relative speed adopting EVs, much more rapid progress will be required to reach the City of Victoria's goal of 30% of all registered vehicles being EVs by 2030, as shown in Figure 2. Figure 3 shows how the City of Victoria compares to neighbouring municipalities, Vancouver Island, and all of British Columbia (BC) in terms of percent of EVs of all registered vehicles.

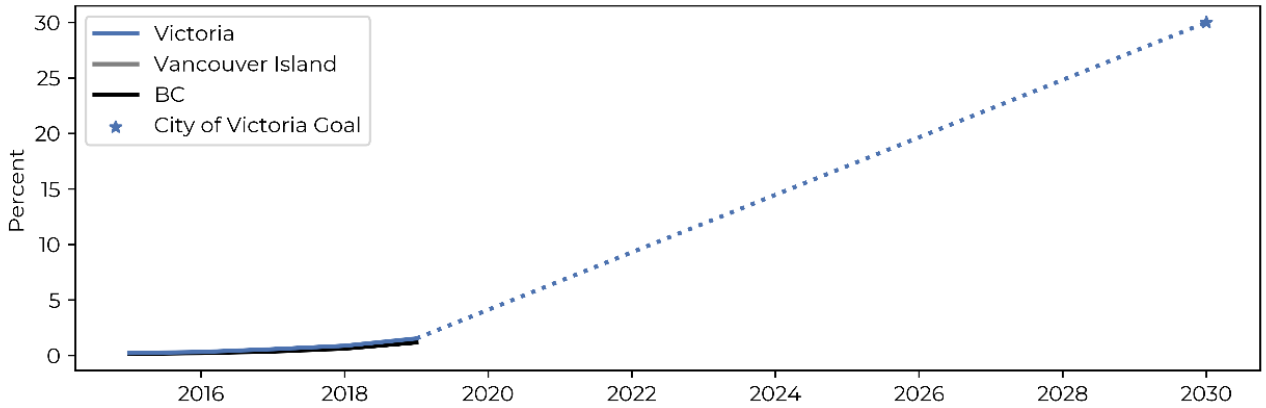

Figure 2: Current EV ownership as percent of all vehicles in Victoria and the City of Victoria goal of 30% EVs by 2030. (Data Source: [2])[4]

[2] BC Ministry of Energy, Mines, and Low Carbon Innovation. (2020). EV vehicle registration data. *Personal communication, October 13, 2020.*

[3] Due to the absence of vehicles sales data by municipality, vehicle model year from ICBC registration data is used as a proxy for new vehicle sales. This is not a perfect proxy for new vehicle sales as it does not take into account vehicles purchased in one jurisdiction and registered in another. However, by model year, EVs did make up 9% of vehicles in 2019 province wide, which matches with reported sales for that year.

[4] Data obtained from the public ICBC Tableau site includes inconsistencies when classifying PHEVs. Data was cleaned by AES Engineering to properly classify most PHEVs, though errors may still exist. Cleaned data differs slightly from data provided by the Ministry of Environment and Climate Change Strategy, however differences are less than differences with the original ICBC data.

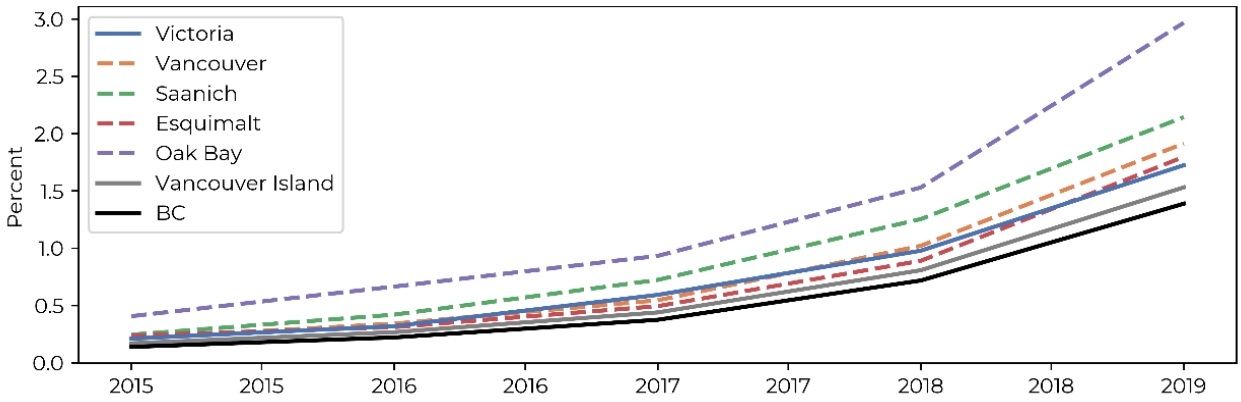

Figure 3: BEV and PHEV ownership as a percent of all vehicles in Victoria and other municipalities, Vancouver Island, and BC. (Data Source: [2])[4]

The distribution of EV ownership in 2018 and 2020 in Victoria by postal code is shown in Figure 4, with EV ownership aggregated by census tract in Figure 5. The corresponding housing types of EV owners in Victoria is shown in Figure 6, based on housing types and EV counts aggregated by postal code. This shows the majority (55%) of EV owners live in single family dwellings (SFDs) [3] [4].

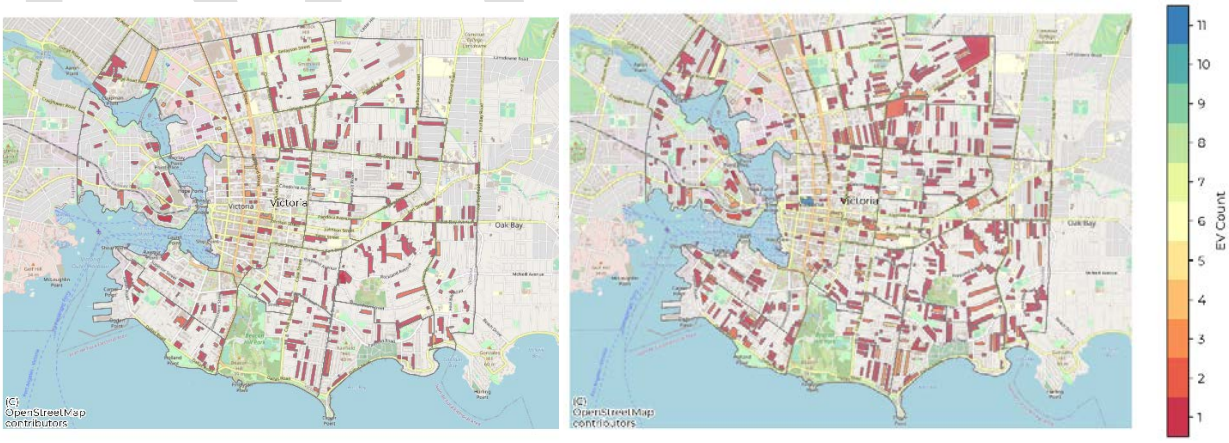

Figure 4: EV ownership by postal code in Victoria for 2018 (left) and 2020 (right). (Data Source: [3])

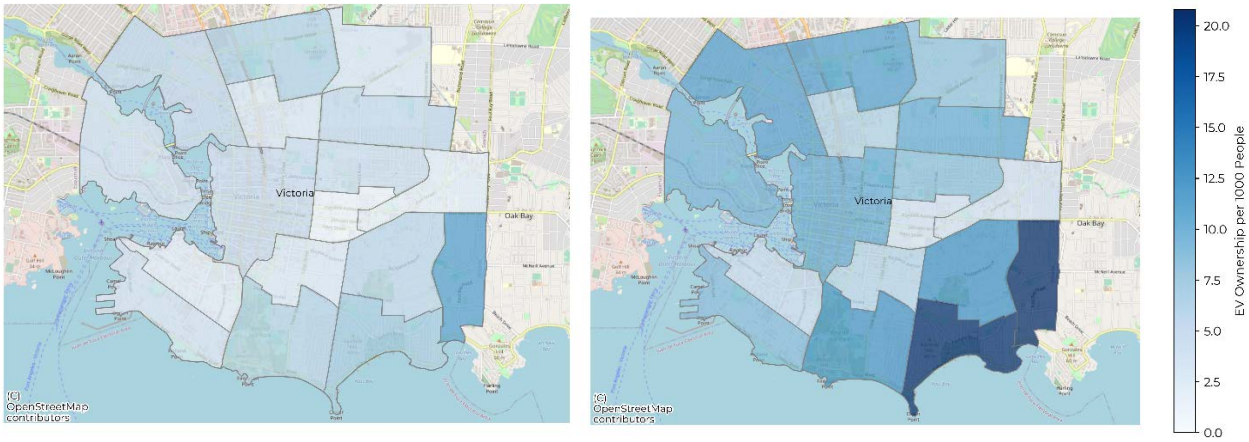

Figure 5: EV ownership per 1000 people by census tract in Victoria for 2018 (left) and 2020 (right). (Data Source: [3])

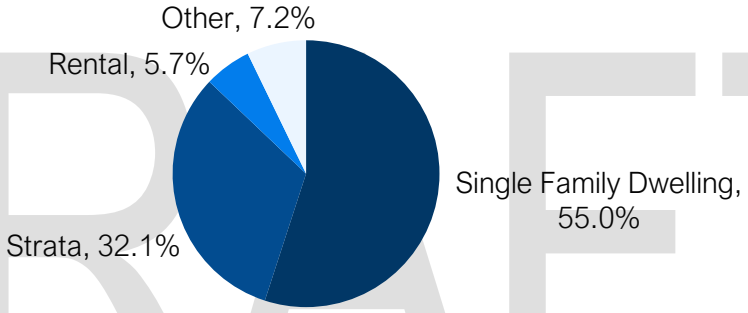

Figure 6: EV ownership by housing type (title) in Victoria. (Data Source: [3] [4])

2. Charging Infrastructure

Charging infrastructure, whether in homes, workplaces, or public locations, is critical for EV adoption. This section looks at current access to home and public charging in Victoria. An in-depth review of potential charging infrastructure expansion options for the City is covered in the Leading Practice Review section.

Key Insights

- At home charging is currently challenging because the majority of Victorians live in multi-residential buildings. Only 22% of residents currently have the potential to charge at home.
- Public charging consists of 74 Level 2 stations, but there is no DCFC access inside City limits.
- City-owned stations are typically engaged by people charging while at work and secondarily while enjoying evening shopping or entertainment.

Access to Home Charging

The most convenient location for EV drivers to charge their car is generally at home, where vehicles are frequently parked for long periods of time. Therefore, increasing access to home charging is a key opportunity for increasing EV adoption.

Access to home charging can be estimated by considering the potential to install charging in different housing types. For example, home charging can often be installed in SFDs if there is a driveway in which to park a vehicle. Experience at Dunsky Energy Consulting and input from the City of Victoria indicate approximately 75% of SFDs in Victoria could install a charging station on their own property with relatively simple and inexpensive changes to existing electrical infrastructure. In contrast, multifamily housing types like apartments generally require more substantial and challenging upgrades to provide access to home charging. A summary of estimated charging potential for different housing types is provided in Table 2.

In Victoria, the majority of residents live in multifamily dwellings; only 14.3% live in single-detached houses. A full breakdown of the percent of Victoria residents in different housing types is shown in Table 2. The large number of residents in apartment buildings makes home charging particularly challenging in Victoria.

Using the housing types and the charging potentials in Table 2, home charging potential across Victoria is estimated at 22%, approximately half of the estimated 45% access across the Capital Region. Figure 7 shows a map of home charging potential by census tract in Victoria, overlayed with median household income.

Table 2: Estimated charging potential housing type and percent of Victoria residents living in each housing type (Data source: [5]).

Housing Type	Assumed Charging Potential	Percent of Victoria Residents
Single-detached house	75%	14.3%
Other single-attached house	75%	0.2%
Semi-detached house	70%	2.5%
Apartment or flat in a duplex	50%	9.8%
Row house	40%	4.9%
Apartment less than 5 storeys	5%	50.3%
Apartment greater than 5 storeys	5%	17.9%

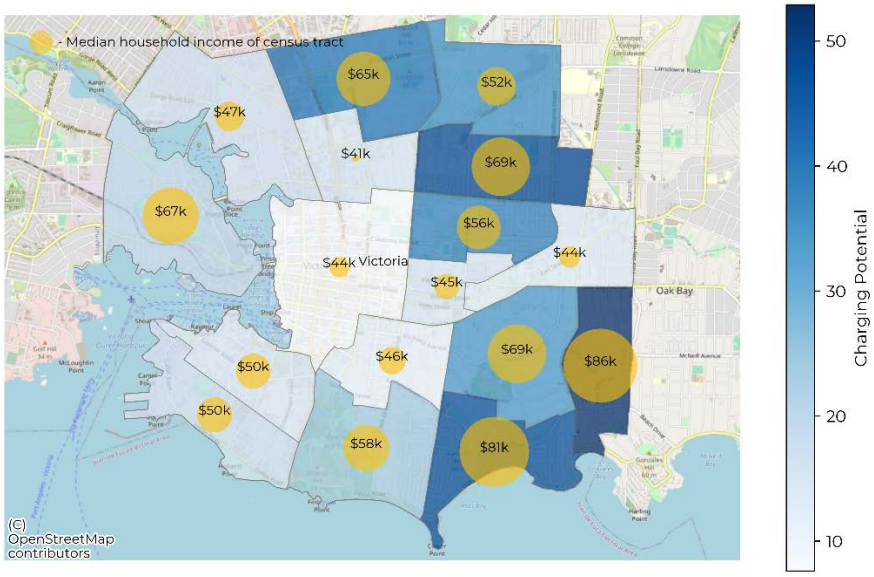

Figure 7 Home charging potential in Victoria by census tract, overlayed with median household income. (Data source: [5])

Home charging access will need to increase significantly in order to meet the City's targets for 2030 and beyond, especially when considering other barriers to adoption. Strategies for addressing this gap will be explored further in the Scenario Analysis section.

Public Charging Infrastructure

Public charging stations in Victoria are shown on the map in Figure 8. There are 74 Level 2 public charging stations within Victoria, and two DCFCs located on Store St close to the Johnson St Bridge. These maps show the total number of stations in each census tract, as well as marking individual station locations with

the type of facility they are located at. Facility types are based on Natural Resources Canada classifications, with similar facility types grouped together for readability.

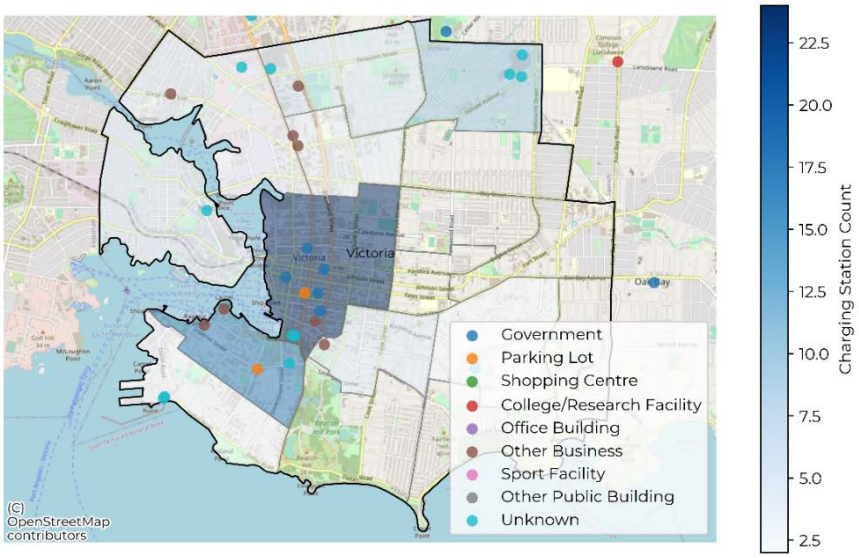

Figure 8: Map of public Level 2 charging stations in Victoria, with total number of charging stations shown with shading. (Data source: [6], [5])

Some of these stations are owned and operated by the City of Victoria. Those stations are shown in Figure 9, with the bubble size for each station representing usage since 2018, as indicated by the total amount of energy delivered by each station. Usage patterns of these station can be seen by considering the heat maps in Figure 10, which show, on the left, the starting hour of each session for each day of the week, and on the right, the amount of power delivered by the station during each hour for each day of the week.

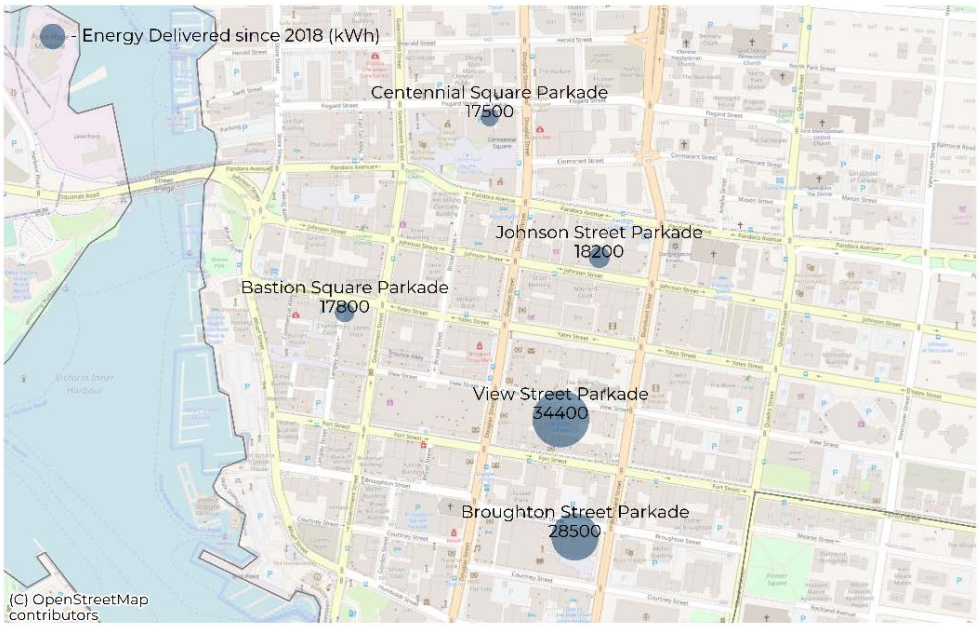

Figure 9: Location of City of Victoria Level 2 charging stations, with total energy delivered since 2018 shown in bubble size and text. (Data source: [7]) In addition, a DCFC station has been installed at Store Street.

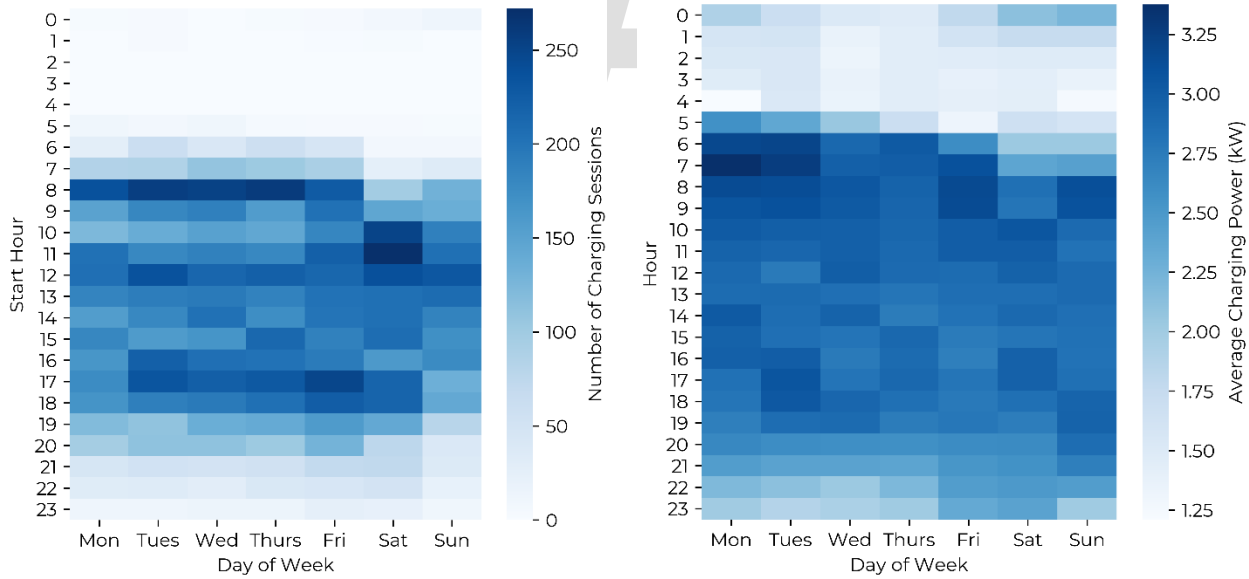

Figure 10: City of Victoria Level 2 charging station usage by hour of day and day of week. Left: Number of charging sessions starting at each time. Right: Average power delivered at each time. (Data source: [7])

On weekdays, the greatest number of charging sessions start in the morning (around 8am), which is consistent with charging patterns expected from commuters into Victoria. There are also a significant

number of charging sessions which start around 5pm, which likely represents people charging after work who come into Victoria for shopping or entertainment in the evening.

On weekends, charging often starts mid-morning (10 or 11am), with more usage on Saturday than Sunday. Throughout the week, although almost no vehicles arrive at the stations between 11pm and 6am, some vehicles plug-in before 11pm and charge through the night. This likely represents a very limited number of residents who use the stations in lieu of home charging.

This section details leading practices from around the world to accelerate the adoption of EVs, and the technical, cost, and policy consideration for implementation of each. The first five options focus on the deployment of EV charging infrastructure, with a section at the end on other supporting policies and strategies.

Charging at Home	1. Comprehensive EV ready retrofits 2. On-street residential charging
Charging at Work & On-the-Go	3. Enhanced EV ready new construction requirements 4. DC fast charging hubs 5. On-street and public parking lots in commercial centres
EV Ecosystem Policies	6. Financial Incentives 7. Advocating for supportive policies 8. Educational initiatives

1. Comprehesive EV Ready Retrofits

Type: Level 2

Location: Private Parking Lots

Purpose: Residential, Workplace, Opportunity

How it Works

Retrofits to make large percentages (e.g. 100%) of residential parking in existing buildings "EV Ready" represent a promising opportunity to cost-effectively provide convenient access to charging for residents that would not otherwise have home charging.

EV Ready means that residential and commercial developments are retrofitted so that they have energized electrical outlets installed that can charge an EV when a charging station is installed in the future. These retrofits typically include designs for load sharing using EV energy management systems that can allow for significantly greater amounts of EV charging within an existing building's limited electrical supply.

Example(s)

The City of Los Angeles Department of Water and Power offers residential and commercial EV charging station rebate programs. Different rebates are available for Level 2 charging stations, DCFC, and AC and DC charging stations for medium and heavy-duty EVs [8].

Considerations for implementation

Technical

Rather than retrofitting a few individuals stalls at a time, a comprehensive EV Ready retrofit parking has some technical advantages including:

- A future-proof design to accommodate high levels of future EV charging by designing for EV energy management systems from the outset. Otherwise, incremental additions of a few pieces of electric vehicle supply equipment (EVSE) can result in stranded assets once electrical systems need to be upgraded to accommodate additional charging;
- Improved convenience, as drivers are not expected to move vehicles from EVSE parking spots at inopportune times. In 100% EV Ready buildings, drivers park in their normal assigned parking space and charge overnight.

Cost

In multi-residential and non-residential buildings, retrofits to make a large percentage of parking EV Ready can often be achieved at much lower cost per parking space than incremental additions to EV charging. The cost of incrementally installing charging infrastructure through the BC Charging Solutions Incentive Program has been approximately $7,000 per Level 2 EVSE (including both EVSE and other electrical infrastructure costs). In contrast, AES Engineering has typically been able to achieve costs of less than $1,200 per stall of EV Ready parking for 100% EV Ready retrofits, though costs per project will vary substantially and thus far there have been few 100% EV Ready retrofits constructed, making future average cost values uncertain.

Policy

The provincial government may implement a program to provide incentives for 100% EV Ready residential retrofits. The program would also include incentives for EV Ready retrofits to workplaces and fleet parking areas. There may be opportunities for local governments to provide “top-up” funding for this program.

In addition, the City could explore requirements for EV charging infrastructure in existing buildings and facilities. BC municipalities have adopted requirements for residential and commercial parking in new developments to be EV Ready; it may be the case that local governments have authority to establish requirements for EV charging infrastructure in existing buildings.

The City could explore whether it could use its authority to regulate parking design to require that parking in existing buildings be made EV Ready by a future date (e.g. 2025 or 2030). Combined with incentives, this could help ensure access to EV Ready parking in multi-residential buildings and/or workplaces. Likewise, the City could explore applying EV Ready requirements if developments undergo renovations.

EV retrofits could be supported via financing programs involving municipalities. For example, Californian cities have supported EV charging infrastructure as part of Property Assessed Clean Energy (PACE)

financing initiatives [9]. While PACE financing authority requires investigation and is unlikely to be appropriate for stratas, it could be valuable for rental building owners. Other sorts of financing tools (e.g. credit enhancements to support more favorable terms for loans to stratas) could also be explored.

2. On-Street Residential Charging

How it Works

Type: Level 2

Location: On-street

Purpose: Residential

On-street level 2 charging can also be deployed to support residential charging for drivers without charging at home. Although it may be feasible to install charging stations from dedicated power sources, most programs for on-street charging for residential applications have either been powered from existing streetlight infrastructure (see *On-Street Level 2 Charging with Streetlight Hardware* inset), or from private residences. The specific requirements of residential charging relative to opportunity charging (see Practice 5) are important to consider when designing charging systems and the policies that support them [10].

Example(s)

The City of Berkeley, California has run the *Residential Curbside Electrical Vehicle (EV) Charging Pilot Program* since 2014 with the goal of allowing residents without off-street parking to access EV charging. Residents can apply to install two types of EV charging: on-site and curbside. On-site charging can be installed at residences with no driveway but room on the property for charging (e.g. in the yard), where "vehicle-related paving" can be installed for EV charging, which does not require the same zoning and permitting as a parking space. Curbside charging can be installed if there is no room on-site with electricity fed from the adjacent residence. The applicant can decide to use the installed station for personal use only or make it available to other members of the public, however, the parking space cannot be reserved in any way. Personal-use stations must be made inaccessible to the public by locking the cord or disconnecting power. Public-use stations must be accessible and free of charge. All costs are covered by the applicant. All additional details can be found in the pilot manual at [11]. Staff at the City of Berkeley have expressed that both cost, concern about access to curbside chargers (due to lack of restrictions for parking), and placement limitations (e.g. street trees) have limited the number of stations that have been installed, with "far fewer" of the 35 qualified applications for curbside charging actually being installed [12].

New Orleans has also implemented a program which allows residents to install curbside charging stations if they do not have off-street parking. Installed EVSE can only be used for private, non-commercial uses and fees cannot be charged. Like the City of Berkeley, the resident cannot reserve the parking space beside the EVSE in any way. [13]

A similar program was also piloted in the City of Vancouver from 2017 to 2019 [14]. In this case, use of the charging station was explicitly restricted only to the resident, although existing parking regulations were maintained for access to the parking space [15]. This pilot has since ended, and Vancouver's 2020 Climate Emergency Action Plan shifts focus towards installing charging on streetlights and third-party lots

near homes, while also providing guidance on use of cord covers to enable safe use of extension cords to cross sidewalks to support Level 1 charging on residential streets.

Considerations for implementation

Cost

Bringing power from residences to curbside can be expensive, as highlighted by experience in the City of Berkeley which saw costs of $5000 to $20,000 [12]. If parking spaces are to be publicly accessible, allowing residents to recoup electricity and infrastructure costs through EVSE user fees should be considered.

Policy

Allowing residents to install curbside charging stations associated with private dwellings will likely create an expectation that they will have 24/7 access to charging if they pay for the charging station and power. This will generally conflict with parking regulations, unless they can be adapted to allow residents exclusive access to a parking location.

Alternatively, this kind of approach could be targeted in areas with low demand for street parking. Areas with high demand for street parking (typically the case in Victoria) may be better suited to public on-street charging using streetlight or other power sources which is managed by the City.

On-Street Level 2 Charging with Streetlight or Utility Pole Hardware

On-street Level 2 charging can be implemented making use of existing streetlight hardware. Additional considerations for these systems are discussed here, along with examples of implementations in other regions.

Examples

In partnership with BCIT, in 2017 the City of New Westminster piloted implementation of five streetlight chargers on streetlights to provide curb-side charging.

The City of Toronto and Toronto Hydro recently launched a new on-street EV charging pilot, including in neighbourhood parking permit locations. Overnight, when permit parking regulations are in effect, only permit holders with an EV that is plugged in can park in these spots. Charging equipment is installed directly onto Toronto Hydro utility poles.

London Councils' Go Ultra Low City Scheme (GULCS) programme has provided guidance and funding to boroughs on the installation of EVSE using streetlight supply, resulting in 320 lamppost charge points [26]. Extra capacity on lamp poles that could be used for EV charging was made available by changing light-fixtures from HPS to LED [31]. Lamp post charging in London requires the driver to use their own "smart cable", supplied by Ubitricity. This cable includes metering and communication to bill the driver for electricity use [27]. In 2018, Ubitricity also won the NYCx Climate Action Challenge to pilot the use of its smart charging cable on streetlight poles in New York City [32] although it is unclear whether detachable cables are permitted for Level 2 charging in North America.

The City of Los Angeles' has also installed 431 EV charging stations on streetlights around the city. These are predominantly FLO and ChargePoint charging stations with an attached cable. They make use of extra electrical capacity resulting from the switch from sodium-vapour to LED bulbs [28].

Technical Considerations

Streetlight systems must be evaluated to determine if they have sufficient electrical capacity for EV charging. Spare capacity may exist or could be made available from retrofits to LED streetlight bulbs. LED upgrades can reduce electrical load by 50% compared to High-Pressure Sodium or Metal Halide light fixtures [12]. Victoria has completed retrofits of lighting in the City which may have created spare capacity.

Streetlight charging systems can either have a charging station mounted on the pole which includes a charging cable (similar to standard Level 2 charging stations in North America), or they can require that the user supplies their own "smart cable" which plugs directly into an electrical outlet on the pole. Requiring EV drivers to carry their own charging cable would be a paradigm shift for North American drivers; however a pilot project in New York does provide a North American precedent for requiring drivers to supply their own cable. The smart cable offered by Ubitricity does not yet appear to be certified in Canada, so these solutions may be delayed until solutions certified for use in Canada are available [31].

Cost Considerations

Costs for London's streetlight charging stations are reportedly about $2300 CAD per charging point, with the "smart cable" costing the user an additional $340 CAD [31]. The cost of installed charging stations with cables in the City of Los Angeles are estimated between $6,800 and $9,500 CAD [31].

Policy Considerations

BC Hydro owns many of the light poles in Victoria and indicated initially to the City that they will not allow other parties to use them for EV charging. This topic could be revisited given the recent precedent in other cities including Los Angeles and Toronto.

3. Enhanced EV Ready Requirements for New Buildings

How it Works

Type: Level 2

Location: Private Parking Lots

Purpose: Residential, workplace

EV charging requirements for new buildings include:

1. Requirements for all residential parking in new developments to be EV Ready.
2. Requirements for some non-residential parking to be EV Ready (e.g. 20-50% for workplace parking, 10-20% for visitor parking).

An EV Energy Management System (EVEMS) can support load sharing between vehicles, reducing electrical system sizes and associated costs. BC municipalities typically specify minimum performance requirements for projects using EVEMS, to ensure sufficient energy delivery per vehicle for overnight charging in residential parking.

Example(s)

17 BC local governments have adopted 100% EV Ready residential requirements, and some also require EV Ready commercial parking. City of Victoria is a leader on Vancouver Island, having recently adopted 100% EV Ready requirements for residential parking, as well as interim non-residential EV Ready requirements. In addition, the City is participating as part of a cohort of BC municipalities is currently considering options for non-residential EV Ready parking requirements (led by AES Engineering).

Considerations for implementation

Technical & Cost

Requirements for EV charging infrastructure in non-residential buildings should consider different use cases (workplace parking, visitor parking, car-share, and ride-hailing) and the charging systems that will best supports these. For example, charging provided at workplaces can make use of load-sharing via EVEMS in order to reduce infrastructure costs while still providing sufficient power to workers who will leave their vehicle for the entire day to charge, similar to EV Ready requirements for residential buildings. Conversely, visitor, car-share, and ride-hailing users will need higher power charging.

For example, for non-residential building archetypes with a large amount of workplace parking, such as office buildings, estimates of the incremental cost of 20% EV Ready parking in new developments with dedicated circuits (no load sharing) often range from $2300 to $4600 per parking stall for surface parking and $1600 to $2900 for underground parking. With 4-way loading sharing for workplace parking, and 25% EV Ready workplace parking and 10% EV Ready visitor parking, this range is reduced to approximately $1300 to $2200 for surface parking and $900 to $1300 for underground parking. These estimates are based on costing studies performed by AES Engineering for cities in the Lower Mainland.

Policy

Ongoing work to develop non-residential EV charging requirements for BC municipalities suggests that these requirements would achieve the best outcomes by differentiating between workplace and visitor designated parking, with higher power and lesser percentages of EV Ready parking required for visitor parking. An example distribution of workplace parking is presented in Table 3. Means of differentiating between workplace and visitor (opportunity, car-share, ride-hailing) parking as part of EV Ready requirements in the City's Zoning Bylaw are recommended to be explored.

Table 3: Example distribution of workplace and visitor parking based on building use.

Non-Residential Use	Percent Workplace Parking (Remainder is Visitor Parking)
Store, Restaurant	30%
Office space	90%
Industrial & commercial	90%
Storage warehouse	90%

4. DC Fast Charging Hubs

Type: DCFC

Location: Private Parking Lots, Public Parking Lots, On-street

Purpose: Opportunity/ Range Extension

How it Works

DC fast charging (DCFC) can provide fast charging in high-traffic locations. DCFC is seen as critical to allowing long-distance travel. It can also provide convenient, fast charging to users without readily accessible charging at home. Locating multiple chargers in a single hub can support a larger volume of EV drivers as adoption increases.

Example(s)

London's Electric Vehicles Infrastructure Delivery Plan includes the development of rapid charging hubs, primarily serving high-mileage/business users, with the goal of delivering five flagship hubs. [16] The first of these hubs, located in Stratford International Station, opened in December 2019. [17]

The City of Vancouver currently manages nine DCFC stations at five locations. The City of Vancouver has stated the goal of having a DC Fast Charging hub within a 10 minutes drive anywhere in Vancouver by 2021. [18]

The City of Portland, Portland State University, and Portland General Electric (PGE) have partnered to setup a DC fast charging hub in downtown Portland with three 50kW DCFC stations supplied by Greenlots. PGE has additional charging hubs, called "Electric Avenues" in six other locations which have both DCFC and Level 2 stations [19] [20].

Considerations for implementation

Technical

DCFC stations generally require a three phase 480 V supply. The cost of a new electrical service for the high power necessary for DCFC hubs can vary substantially from site to site. The cost of different locations should be considered early-on, and utilities engaged early, when selecting suitable sites for DCFC hubs.

Publicly accessible DCFC may become increasingly viable and convenient as a primary means of charging vehicles as vehicles' range and charging speeds increases.

Cost

The cost for DCFC charging stations is approximately $800-1000/kW but varies depending on the supplier. The electrical infrastructure and installation costs vary more widely depending on the site but can easily cost as much or more than the charging station itself. Some sample costs are provided in Table 4.

Table 4: Example costs for DCFC charging station and installation based on experience at AES Engineering and recent Dunsky analysis conducted for the federal government. Costs may vary widely depending on charger selection, number of charging stations, and site selection.

DCFC Power	Charging Station Cost	Approx. Installation Cost	Total Cost
25kW	$15k	$10k - $50k+	$25k - $65k+
50kW	$55k	$20k - $100k+	$75k - $150k+
100kW	$90k	$40k - $100k+	$130k - $190k+
350kW	$140k	$60k – $115k+	$200k - $255k+

5. On-street and Public Parking Lots in Commercial Centres

How it Works

On-street Level 2 and DCFC can support opportunity charging. Access to such charging may be particularly important for ride-hailing, taxis, and other high-mileage vehicles [21]. In addition to implementing with standard freestanding EVSE, on-street opportunity charging can make use of existing streetlight hardware (see *On-Street Level 2 Charging with Streetlight Hardware* inset).

Type: Level 2, DCFC

Location: On-street, public parking lots

Purpose: Workplace, Opportunity/ Range Extension

Level 2 charging infrastructure can also support workplace and opportunity charging when it is made available in public parking lots, whether these lots are owned by the City or by other entities. The City could invest in Level 2 charging at its City-owned off-street parking lots.

Example(s)

The City of Vancouver currently manages 79 public level 2 charging stations, 38 of which are on City properties. [18]

The City of Seattle's Department of Transportation (SDOT), in partnership with its Office of Sustainability & Environment and the City-owned electric utility Seattle City Light, launched a pilot program in 2017 to facilitate the permitting of Level 2 or DCFC charging on-street or in other public rights-of-way (ROW), the Electric Vehicle Charging in the Right-of-Way Permit Pilot (EVCROW). This program was open to both City-owned EVSE, as well as private sector EV charging network operators. The program received 68 applications for EVSE installations; however, due to challenges with the pilot, only 1 EVSE installation has occurred, and this EVSE is owned and operated by the City. A program evaluation published by the SDOT identified the following opportunities to improve outcomes [22] [10]:

- Identify appropriate parking spaces for EVSE implementation, rather than relying on the private sector to propose sites. The most important challenge facing program participants was finding suitable sites where charging infrastructure could be installed at a reasonable cost. Sites should be screened against transportation and utility plans to avoid potential conflicting ROW demands (e.g. future bike lanes; transit lanes; utility upgrades; etc.)
- Consider relaxing EVSE siting criteria. It proved very difficult to find sites that met all requirements, includes maintaining accessibility of public rights-of-way to comply with the Americans with Disabilities Act (ADA) (e.g. large sidewalk and parking space widths); not being in high demand areas; protecting street trees; and avoiding interference with pedestrian and bike infrastructure.
- Reduce risk for private investment related to on-street operating permit. The SDOT program included an annual permit renewal, creating uncertainty for private investment. Private sector investment in on-street parking requires a 3-5 year timeline at very minimum, to allow for a reasonable business case for installing infrastructure.

The cities of Montreal, New York, and LA have also installed on-street EV charging using AddEnergie stations. [23]

Considerations for implementation

Technical

The City can streamline the site selection process by pre-selecting suitable sites for EV charging [10]. If DCFC stations are to be installed, the ability to bring 480 V with sufficient capacity to the charging stations and the associated costs is an important consideration when selecting suitable sites.

When using Level 2 charging at for workplace charging in public lots, parking dwell times of approximately 8 hours can generally be expected and returning to a vehicle during the day may be infeasible. Therefore, providing slower charging rates for EVs that require workplace charging is ideal to properly support these users

Cost

Costs for on-street charging depend heavily on proximity to existing power, number of charging stations, and whether charging stations are freestanding or streetlight mounted (see *On-Street Level 2 Charging with Streetlight Hardware* inset). Based on experience at AES Engineering, for large installations of freestanding charging stations, costs may average about $10k per station, while for smaller installations (i.e. less than 5), costs could be up to $20k per station.

For parking lots, converting a large percentage of parking to EV Ready at one time is generally much lower cost per parking space than incrementally adding EV charging (as discussed in the Comprehensive EV Ready Retrofits section). The ongoing operating costs should also be considered.

Policy

The City can conduct comprehensive upgrades to its City-owned parkades to support a growing amount of EV charging into the future.

Any policy to promote on-street EV charging should consider the needs of different charging technologies (Level 2, DCFC) and use-cases (ride-hailing, freight and goods delivery, private vehicle owners) separately [10].

Competition for on-street space from transit, active transportation, and vehicle congestion can lead to challenges is providing on-street opportunity charging in urban centres or commercial areas, as was experienced in the City of Seattle [10].

If the City wishes to enable private investment in on-street EV charging infrastructure, the experience from Seattle suggests it is important to consider how to support an attractive investment climate [10]. Pre-identification of sites, engagement with BC Hydro to determine likely costs, and long-term permitting to provide certainty for private EV charging network developers.

The City could provide funding and other supports for the private sector to implement publicly accessible EV charging on private property. Alternately, the City could partner with private sector partners to implement City owned and/or managed EV charging infrastructure on private property. The City should consider the pros and cons of managing charging infrastructure on private property; staff from some leading cities have expressed hesitancy about implementing City-owned EV charging services on private property. Key considerations include:

- Access to EV charging sites.
- Liability issues.
- Whether the City can provide funding businesses, and if this constitutes an assistance to business.

EV Ecosystem Policies

Accelerating adoption requires a supportive market and EV ecosystem. Charging infrastructure is a critical tool in this effort, made even more powerful due to the City's level of control. However, the City's ambitious 2030 target requires an all-encompassing approach. This section reviews a series of policies that can be introduced to support the incentive required to achieve the 2030 adoption. There are many aspects of the legislative and market ecosystem that are outside the City's power, but not its influence. Advocacy and education with these key players are vital to ensure the City is ready to go electric.

Financial Incentives

How it works

The business case for owning an EV must be advantageous compared ICE vehicles to accelerate adoption. These costs include both upfront and lifetime costs, including operations and maintenance. In Victoria, where average kilometers travelled is quite low compared to other regions, the cost-effectiveness of EVs is lower due to lower savings on fuel and maintenance costs. Currently, the federal and provincial governments offer financial incentives for EVs and charging. If needed, the City could also deploy incentives through several approaches, which could be partially or fully self-financing through a fee-bate system introducing fees to ICE vehicles with a reduced or removed fee as a 'rebate' for EVs.

Examples

Zero Emissions Zones (ZEZs) are increasingly recognized as perhaps the most potent tool local governments can use to support adoption of EVs [24]. ZEZs are areas that cities designate that by some point in the future (e.g. 2025, 2030, etc.), only EVs and other zero emissions vehicles may access the area; polluting vehicles will need to pay a fee, and may ultimately be banned entirely.

ZEZs may start by impacting only certain modes of transportation (e.g. taxis, delivery trucks) and then ultimately encompass private automobiles as well [24]. ZEZs have been established by prominent European cities, such as London, Madrid and Amsterdam. Moreover, city signatories to the Fossil Fuel Free Streets Declaration, including the City of Vancouver, have committed to making some major portion of the City zero emissions by 2030.

On-street parking regulations offer a tool to prioritize the allocation of this on-street resource to low-carbon vehicles. Notably, the City of Vancouver recently approved a carbon pollution surcharge on residential parking permits, and will charge significantly higher fees for *newly-purchased* vehicles above a certain price threshold (e.g. $40k - $50k); these requirements would not impact existing vehicles, nor lower cost new vehicles, thereby addressing equity concerns.

Considerations for Implementation

Zero Emissions Zones:

The legal authority for BC local governments to establish ZEZs still requires exploration and establishing a ZEZ may require legislative changes. It may be possible for the City to integrate a ZEZ into any future mobility pricing scheme, for example by reducing fees for EVs. Alternatively, local governments may be able to approximate a ZEZ by charging higher fees for polluting vehicles to stop or park at the curb, under existing authorities with regards to parking.

As these types of charges are not currently imposed by the City, the development of a statement of intent would be sufficient until such a time that these types of charges are implemented. Indeed, a significant source of the power of a ZEZ is signalling cities' intent regarding future vehicle regulations, and thereby encouraging vehicle owners to choose zero emissions vehicles.

The City could create a cross-divisional working group to explore the feasibility of ZEV pilot project. In parallel, the City could explore developing a statement of intent to reduce or exempt EVs from future toll or congestion charges.

On-street Parking Regulations:

The City's parking regulations currently do not discriminate between electric and ICE vehicles. The City could consider revising the residential parking permit zone requirements to move to a user-fee based system. Under this structure, ICE vehicles could higher fees imposed than EVs. Implementation of this type of update should include an assessment and profile of users of on- and off-street parking and ensure fees do not create inequitable financial barriers.

Advocate for Supportive Policies

Requirements and incentives provided by the Provincial and Federal governments can play a large role in advancing the EV market in the City.

The City can advocate for Provincial and Federal policies to encourage the transition to EVs. Opportunities exist at both levels of government for rebates for new and used vehicles, for incentives for EV charging, or to expand existing benefits for EV drivers (e.g. HOV lane access on provincial highways). The City could support provincial Right-to-Charge legislation and advocate for the regulation to provide appropriate timelines considering individual or comprehensive retrofits. Strengthening the provincial zero emission vehicle act and/or introducing a national mandate could play a major role in increasing the supply of EVs.

Similarly, the City can advocate and work with the province's electricity and natural gas utilities to encourage adoption. The City could encourage beneficial policies (e.g. demand charge reform) and continued or enhanced incentives. The City could encourage the development of electrical resource education and availability of local electrical resource information.

Educational Initiatives

Many consumers and businesses are unaware, misinformed and/or uncomfortable with EVs, charging infrastructure, incentive programs, and other important information supporting consumer adoption of EVs.

The City can play a role in electric mobility transportation by acting as a centralized information hub to support residents and business preparing for or deploying EV infrastructure. The City can leverage the strong existing network of engaged residents and association resources. The City can also utilize *Go Electric BC* and *Plug-in BC* as a guide for residents and business, while assessing and filling any local information gaps.

Scenario Analysis

This section provides an assessment of EV adoption in the City of Victoria over the 2021-2030 period. First, a baseline forecast was developed to estimate adoption in the absence of further charging infrastructure investments and supporting policies. Charging infrastructure and incentives were added to the baseline and scenarios were modeled such that the adoption forecasts met the City's target for 2030. In addition to providing EV forecasts, this section also quantifies the infrastructure and incentives required to achieve the 2030 goal and a proposed investment plan for the City.

Key Insights

- Under a business-as-usual baseline scenario, EV adoption will reach between 8% and 13% by 2030, well below the City's target.
- To reach the adoption target, the City would need to invest $15M between 2021-2030 across EV Ready retrofits for existing buildings, Level 2 and DCFC charging infrastructure.
- With this infrastructure investment and with current purchase incentives maintained, the City's EV adoption will reach between 17% and 31% by 2030.

Dunsky's Electric Vehicle Adoption (EVA) Model

Dunsky's Electric Vehicle Adoption (EVA) Model was developed in-house to address a growing need to understand the adoption of electric vehicles in specific jurisdictions. Based on a rigorous review of research from academia and industry, EVA assesses the likely penetration of electric vehicle technology based on several key factors, grouped according to the following four categories:

1) Technical potential: The theoretical potential for EV adoption based on the size and composition of the overall vehicle market, as well as availability of different powertrain types (e.g. plug-in hybrid, battery electric) in different vehicle classes (e.g. cars, SUVs, trucks)

2) Customer economics: The unconstrained economic potential based on incremental total cost of ownership of electric vehicles over conventional vehicles, taking into account forecasted energy costs, annual vehicle kilometers travelled, and forecasted battery and vehicle costs

3) Market constraints: Accounting for EV-specific barriers including range limitations and access to both public and home charging infrastructure

4) Market dynamics: Incorporating technology diffusion theory and other market factors to determine rate of adoption and competition between vehicle types

By quantifying the impact of these various factors, EVA allows the development of jurisdiction-specific forecasts for EV adoption and the assessment of the relative effectiveness of a range of policy and program options for accelerating EV adoption, such as home retrofits and public charging infrastructure deployment.

Baseline Scenario

In the absence of additional infrastructure deployments in the City of Victoria (by the City or private market actors), adoption of EVs will continue to grow – largely thanks to decreasing vehicle costs and vehicle model availability – although this growth will be constrained due to limited home and public charging

infrastructure. Although some residents will still adopt an EV, those without access to charging at home or work are expected to perceive significant barriers to EV ownership and many are not expected to transition from internal combustion vehicles.

By first populating EVA with Victoria-specific housing and vehicle market data and then calibrating the model to historic EV uptake in Victoria, the Dunsky team forecasted EV adoption under baseline conditions. Although the baseline conditions do not consider further charging infrastructure installations in the City, the EV-ready new construction code is accounted for, representing a modest increase in home charging potential from 2020 to 2030[5]. The baseline scenario also assumes that financial incentives currently offered by the provincial and federal governments phase out gradually over the next 5 years. Under the baseline, EVs are expected to represent 8-13%[6] of the total vehicle fleet by 2030 (Figure 11). This falls well below the City's Climate Leadership Plan target for 2030[7], indicating the need for market intervention to achieve uptake in-line with the City's goals.

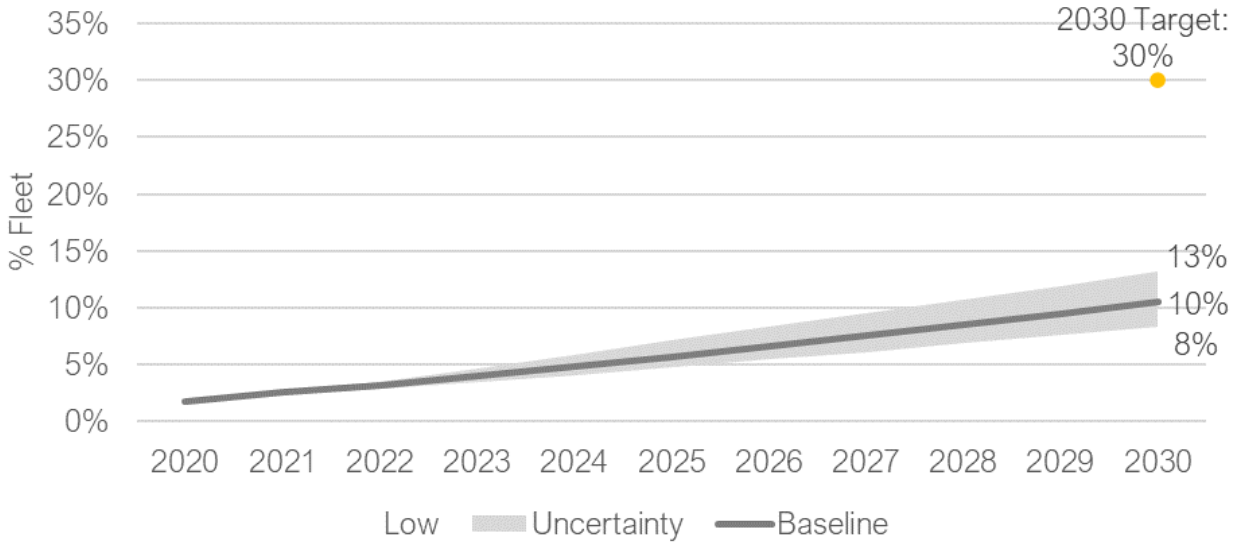

Figure 11. Electric vehicles as a percentage of total fleet under the baseline scenario

Although City targets focus on electric vehicles as a percentage of total fleet, electric vehicles as a percent of annual sales is another common metric used to develop electric vehicle targets. Under the Zero-Emission Vehicle Act, the Province of British Columbia has established targets of zero-emission vehicle sales as 10% of new light duty vehicle sales by 2025 and 30% by 2030. These targets are provided along with the percent annual sales value under baseline in Table 5.

[5] New construction assumptions are included in the appendix.
[6]Adoption is influenced by broader market conditions outside of the City's control, including vehicle prices, vehicle model availability, electricity rates, and gasoline prices. High and low bounds were developed for each of these factors and were applied to all scenarios to generate high, mid, and low forecasts.
[7] The City of Victoria's Climate Leadership Plan includes a target of 30% of all passenger vehicle trips being renewably powered by 2030, and 100% by 2050.

Table 5. Electric vehicles as a percentage of annual sales under the baseline scenario

		2025	2030
% Annual Sales	Baseline – Upper bound	24%	26%
	Baseline – Midpoint	17%	21%
	Baseline – Lower bound	13%	16%
	Provincial target	10%	30%

Under baseline conditions, EV adoption in Victoria will exceed provincial electric vehicle annual sales targets by 2025, even under pessimistic market conditions. By 2030, however, adoption in Victoria drops below provincial targets. This indicates that, while Victoria is currently one of the strongest EV markets in BC today, it will fall well behind other areas of the province that have fewer inherent barriers to EV adoption (primarily access to charging at home) without significant investments in charging infrastructure.

The following sections provide an assessment of the interventions and investment required to achieve City targets.

Infrastructure Investment Scenario

The infrastructure interventions considered in this study include funding for EV Ready building retrofits, public level 2 infrastructure (including on-street, workplace and public lots), and public DCFC charging infrastructure, each of which address different market barriers currently preventing the adoption of electric vehicles. A description of each intervention is provided below along with the total investment requirements. In all cases, the total cost of the deployment is provided along with the estimated City share of that investment. Depending on available funding from other levels of government and potential partnerships with 3rd party organizations, the City would likely not be required to cover the entire cost of these deployments.

EV Ready Building Retrofits

A large portion of Victoria's population lives in multi-family residential buildings and has limited access to home charging infrastructure. While public charging infrastructure can serve as a substitute for home charging access for many early adopters, EV adoption among a broader segment of mainstream consumers is impacted by the reduced convenience and potentially higher costs compared to charging at home overnight. To address this barrier, the city of Victoria has implemented a new construction EV readiness requirement that has been in place since July 2020 and requires all new buildings to have energized electrical outlets installed at the time of construction. The province of BC also offers an EV Charger Rebate program which offers $2000 for the installation of a level 2 charging station designed for multiple users in existing multi-unit residential or commercial buildings with workplace parking.

Looking towards the City's 2030 target for EV adoption, enabling access to charging at home for a significant portion of residents will require retrofits of a large portion of the existing building stock. Recent analysis by AES Engineering has determined that the most cost-effective approach for existing buildings is to perform a comprehensive EV-ready retrofit, whereby energized circuits are provided to every parking

stall during a single renovation, enabling easy installation of an EV charging station at a later date when required. Through this approach, average per-stall costs are estimated to be approximately $1200. Based on anticipated funding programs from other levels of government and expected demand from building owners, we estimate that a City-funded top-up of up to 20% of retrofit costs would be sufficient to general strong uptake of this approach.

Preliminary modeling suggests that while this approach is scalable to enable EV adoption among the majority of multi-residential building residents with access to parking, significant levels of investment would be required. The costs outlined below represent the costs associated with retrofitting all eligible stalls[8] across the residential building stock.

- Total investment: $48.75 million
- Estimated City investment: up to $9.75 million
- Number of retrofit stalls: 40,623

Workplace and Public Level 2 Charging Infrastructure

Level 2 (L2) public and workplace charging infrastructure can enable EV adoption for those with limited or no home charging, provided that access to this infrastructure is reliable. A subset of those currently unable to install Level 2 charging infrastructure without EV-ready retrofits are estimated to consider public or workplace charging an acceptable substitute for home charging and may decide to purchase an EV in the absence of charging access at home. That said, while this approach can be attractive to early adopters who are motivated to adopt an EV, the reduced convenience of relying on L2 charging away from home limits the overall scalability of this solution for increasing EV adoption among a broader portion of the market who would be more likely to choose a gas-powered vehicle.

To estimate the investment required for Level 2 charging to support these EV drivers, preliminary modeling explored and identified a point of diminishing returns from further investment. The non-linear relationship between increased L2 infrastructure and adoption can be explained by the limited number of potential EV drivers who are willing to substitute charging at home with public or workplace L2 charging.

> **Ongoing Monitoring of Infrastructure Utilization**
>
> Monitoring usage of the City's public chargers can ensure planned infrastructure continues to be appropriate to residential patterns and needs. Annual or bi-annual usage reports for City chargers should be prepared and reviewed, with the results used to validate or update installation plans. To support this monitoring effort, all City chargers should be networked.

For Victoria residents, L2 infrastructure deployment is modeled as a mix of 125 charging ports in parkades at $5,000 per port, and 125 charging

[8] Eligible stalls include stalls in multi-family buildings requiring a retrofit prior to the installation of level 2 charging equipment, excluding buildings built from 2020 onwards (assumed to be EV ready as a result of the new construction EV ready building code). The portion of stalls assumed to require retrofits by housing type is included in the appendix.

ports in curbside installations at $15,000 per port, for an average of $10,000 per port. While the modeling results are focused on impacts on EV adoption among Victoria residents to align with the City's targets, an additional 400 ports in parkades are recommended to provide workplace charging for commuters driving into Victoria. Comprehensive retrofits of the City's public parking facilities would enable cost savings on a per-port basis to achieve $5,000 per port for these parkade installations. The following is a summary of the total recommended investment in Level 2 infrastructure:

- Total investment: $4.50 million
- Estimated City investment: up to $2.25 million
- Number of incremental ports: 650 ports

Supporting Commuters into Victoria

As a hub that serves a number of surrounding communities, infrastructure in Victoria will support commuters from jurisdictions beyond the City core who adopt electric vehicles. An overview of the proportion of commuters from neighbouring communities is presented in Table 6.

Table 6: Commuters to Victoria (from census subdivisions representing more than 1% of commuters

Home Census Subdivision of Commuters	Percent of Commuters from this Census Subdivision to Victoria
Victoria	36%
Saanich	32%
Langford	7%
Esquimalt	5%
Oak Bay	5%
Colwood	3%
Central Saanich	3%
View Royal	3%

To estimate the level 2 workplace and public infrastructure expected to be required to meet the needs of those commuting into Victoria for work from Saanich, Langford, Esquimalt, Oak Bay, Colwood, Central Saanich, and View Royal, the following analysis was completed:

1) Quantified the number of light-duty personal vehicles in each municipality in 2019 [2]
2) Estimated the population in each municipality over the 2019-2030 time period [36]
3) Forecasted the light-duty vehicle population over the 2021-2030 period, maintaining the same vehicle per person ratio in each year as 2019
4) Estimated that approximately 10% of the vehicle population in the surrounding areas will be electric vehicles by 2030, in-line with the baseline scenario for Victoria.
5) Given that home charging access levels in these areas exceeds likely EV penetration, estimated that approximately 5% of commuter electric vehicles from the surrounding areas will depend on charging infrastructure in Victoria due to limited home charging access, and that 50% of these EV drivers park in City-owned parkades.

Using the methodology and assumptions outlined above, Victoria is estimated to need approximately 400 additional level 2 ports to support commuters in the surrounding area.

DCFC Public Charging

DCFC public charging infrastructure provides rapid on-the-go charging for both long-distance commuters and visitors, while also potentially providing a substitute for home charging for those without access. As with L2 charging infrastructure, preliminary modeling of investments in DCFC charging infrastructure identified a point of diminishing returns from further investment, although DCFC investments have a much more significant impact on adoption among those without access to charging at home. With charging

times of 30 minutes or less, fast charging approaches the convenience of owning a gas-powered car, especially if fast chargers are sited at convenient locations (e.g. grocery stores) such that charging can be incorporated into a weekly routine. That said, the portion of the market that would see DCFC as a substitute for home charging is limited due to the increased total cost of ownership for an EV relying exclusively on public fast chargers that include higher electricity costs. Beyond a certain level of investment incremental spending would be better spent on other initiatives – notably improving home charging access.

Investments in DCFC infrastructure should consider both geographic coverage (ensuring convenient access to nearby charging sites for all residents) and charging capacity (ensuring each site provides sufficient power to minimize charge times and has a sufficient number of ports to handle the anticipated number of EVs without lineups). The modeled scenario assumes an average charging power of 150kW (enabling up to 300km of range in under 30 minutes) and assumes chargers are distributed at sites with between 2-4 ports per site, achieving a per-port cost of $175,000.

- Total investment: $5.95 million
- Estimated City investment: up to $2.98 million
- Number of incremental ports: 34 ports

Influence of Individual Interventions

To understand the relative impact of EV ready retrofits, level 2 charging, and DCFC charging, each intervention was assessed in isolation. Figure 12 outlines the change in cumulative vehicles adopted by 2030 as compared to the mid-point baseline scenario if investments were only made for a single intervention at a time.

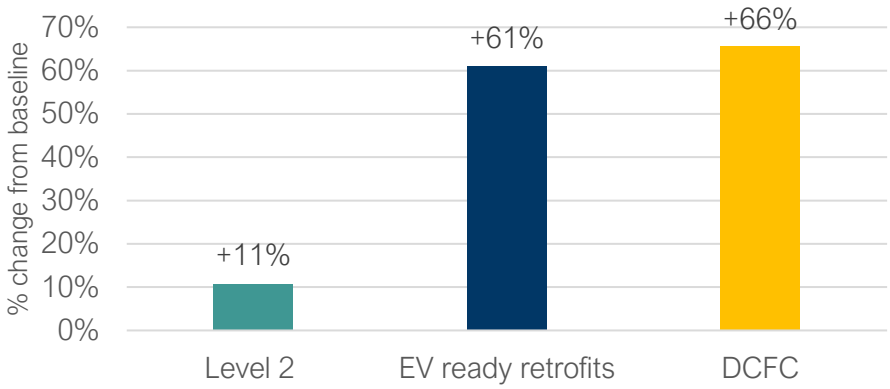

Figure 12. Increase in cumulative vehicles over baseline midpoint by 2030 by intervention

Investments in **DCFC charging infrastructure** show the greatest influence over adoption. Similar to owning a gas car, EV owners without charging access at home could charge up at a DCFC station once a week or so to meet their driving needs, resulting in limited behavioural changes required from new EV drivers.

City investment of $2.98 million in DCFC charging infrastructure is estimated to increase the cumulative number of electric vehicles on the road by 66% over baseline (although still fall short of City targets).

EV ready retrofits are noted as the second most impactful interventions when considered in isolation. After a building has been retrofit, the cost and effort of installing level 2 charging infrastructure is greatly reduced. Once level 2 home charging infrastructure has been installed, EV drivers are able to start each day with a "full tank", minimizing reliance on shared public charging infrastructure. City investment of $10.6 million by 2030 is forecasted to increase cumulative EVs by 61%. While impacts of adoption beyond the study period were not modeled in this analysis, investments in improving home charging access would also have significant long term impacts by ensuring that the vast majority of Victoria residents could benefit from the convenience of charging at home.

Finally, **public level 2 infrastructure** investments increase adoption over the baseline forecast by filling an important role in the market through offering additional public and workplace charging, but shows a limited ability to increase adoption in absence of other complementary interventions. City investment of $1.25 million by 2030 is forecasted to increase cumulative EVs by 11%. However, while the modeling results presented here focus on impacts on adoption among Victoria residents to align with the City's 2030 target, investments in workplace charging would lead to further incremental adoption among residents of the broader CRD region that are not reflected in these results. Further analysis at a regional level could help to build a better understanding of the impact of investments in workplace charging in Victoria.

Infrastructure Investment

To fully address market barriers to adoption, all infrastructure interventions outlined above must be deployed - no intervention will reach the 2030 target in isolation, and in fact even investments in all are not expected to achieve the City's ambitious 2030 goals. Figure 13 outlines the adoption expected from the combined investments in EV ready retrofits and level 2 and DCFC charging infrastructure outlined in the previous section, resulting in EVs representing 14-24% of fleet by 2030 depending on market conditions.

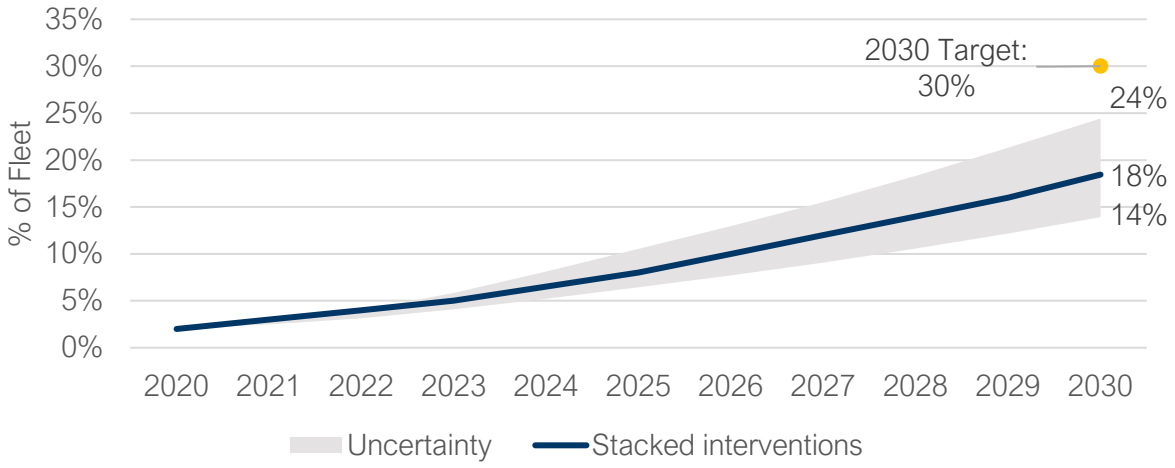

Figure 13. Electric vehicles as a percentage of total fleet following infrastructure investments

Although adoption under this scenario remains below the targeted percent of fleet, EVs as a percent of annual sales greatly outpace Provincial sales targets, as outlined in Table 7, underlining the ambition of Victoria's goals.

Table 7. Electric vehicles as a percentage of annual sales following infrastructure investments

		2025	2030
% Annual Sales	Baseline - Midpoint	17%	21%
	Stacked interventions – Upper bound	45%	62%
	Stacked interventions – Midpoint	31%	48%
	Stacked interventions – Lower bound	23%	35%
	Provincial target	10%	30%

Infrastructure Investment+

Even with the significant city investments in infrastructure seen in the previous scenario, adoption in Victoria is expected to remain below the City's target due to challenging economics for EV drivers. Although electric vehicles currently cost more upfront than internal combustion engine vehicles, electric vehicles often have lower total cost of vehicle ownership compared to internal combustion engines as a result of lower operations and maintenance costs. Victoria vehicle owners drive very few kilometers per year[9], however, and consequently will not experience the same degree of total cost of ownership benefits from the adoption of electric vehicle as drivers who travel further each year.

Given the economic limitations of the Victoria market, an infrastructure investment + incentives (infrastructure investment+) scenario was modeled in which financial benefits in-line with current vehicle purchase incentives were maintained through 2030[10]. Adoption under this scenario was found to reach 17-31% depending on market conditions, presented in Figure 14.

[9] An origin destination household travel survey was completed for the Capital Regional District in 2017, and subsequent analysis found that drivers in Victoria's Core Region travel approximately 6,000 kilometers per year.
[10] This scenario assumes incentives of $4,000 for plug-in hybrid electric vehicles and $8,000 for battery-only electric vehicles are available from 2021-2030.

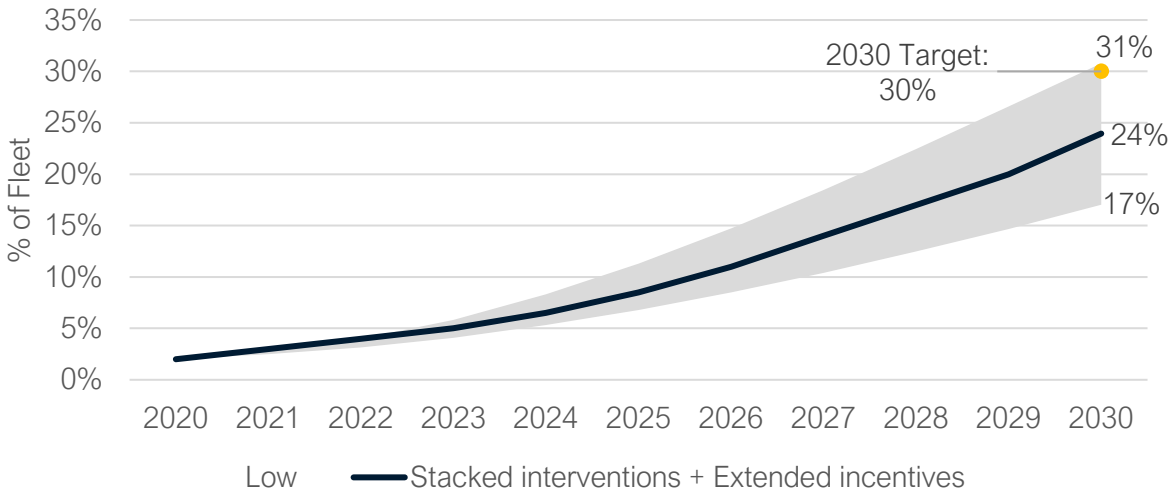

Figure 14. Electric vehicles as a percentage of total fleet following infrastructure investments and extended incentives

Maintaining the current financial incentives offered by the federal and provincial governments is one of a number of approaches that could deliver the same overall results in terms of improving the economics of EV ownership in Victoria. A transition towards a feebate system (where gradually declining purchase incentives for EVs are compensated by gradually increasing fees for the purchase of a gas-powered vehicle) could provide a similar economic signal to encourage EV adoption while being completely self-financing. Alternatively, recurring fees and/or rebates could be designed to have the same overall impact as the current up-front financial incentives. These could take the form of annual parking fees or broader mobility pricing that include discounts for EVs. In all cases, the City will need to work with other actors, either at the regional level to enact a coordinated approach for mobility pricing, or through advocacy with the provincial and federal governments to maintain and/or adapt their current incentive programs.

Again, adoption can be considered from the perspective of EVs as a percent of sales to provide a point of comparison against Provincial targets. When incentives are added to the market in addition to the infrastructure investments included in the previous scenario, adoption reaches well beyond provincial goals, with an upper bound that surpasses 80% annual sales in 2030 as shown in Table 8.

Table 8. Electric vehicles as a percentage of annual sales following infrastructure investments and extended incentives

		2025	2030
% Annual Sales	Baseline - Midpoint	17%	21%
	Stacked interventions+ – Upper bound	56%	83%
	Stacked interventions+ – Midpoint	38%	71%
	Stacked interventions+ – Lower bound	28%	47%
	Provincial target	10%	30%

The following sections outline recommendations for the timing of investments.

Investment Plan

The following investment scenarios presented see City budgets for infrastructure deployment scaling up over the first four years then remaining relatively constant until 2030[11]. As shown in Figure 15, initial deployments focus on public charging infrastructure in an effort to serve the portion of the market with limited home charging access, with the majority of level 2 and DCFC charger installations occurring in the first half of the study period. EV ready retrofits are limited in the early years of the study as programs ramp up, representing the time needed to attract participants and potentially build the capacity of the local workforce. The number of stalls retrofit per year is recommended to grow significantly each year, however, becoming the primary focus of investments over the 2026-2030 period.

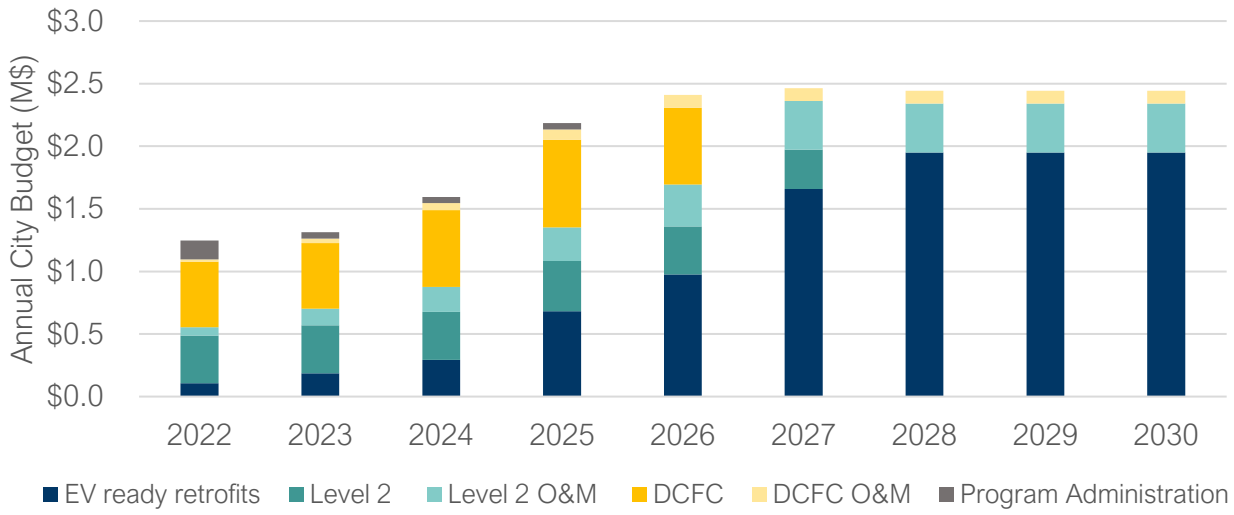

Figure 15. Annual city budget by intervention, 2021-2030

Below, Table 9 provides a breakdown of the annual budget required for each intervention for three points in time during the study – 2022, 2025, and 2030 - and the resulting number of incremental stalls or ports. Budgets for program administration and charger operations and maintenance are also included. Program administration is assumed to be $150,000 for the first year, including costs required to build, deploy, and implement campaigns, and $50,000 for the next four years representing ongoing implementation costs. Administration costs are not included for years 2026-2030 – this budget should be developed after analyzing actual spend over the initial program years. Level 2 operations and maintenance (O&M) is assumed to be $600/port/year and DCFC is assumed to be $3,000/port/year.

[11] It is assumed that the city will cover 50% of level 2 and DCFC charging infrastructure installation costs with the remaining costs covered by other market actors (e.g. government, utility, private sector). It is assumed that the city will cover 20% of EV ready retrofit costs.

Table 9. Annual city budget and overall required investment 2022, 2025, and 2030 (Rounded to Nearest $1,000)

		2022	2025	2030
EV Ready Retrofits	Annual City budget	$107,000	$683,000	$1,950,000
	Stalls retrofit per year	445	2,844	8,125
Level 2 Infrastructure	Budget	$381,000	$402,000	$0
	Ports installed per year	110	116	0
DCFC Infrastructure	Annual City budget	$525,000	$700,000	$0
	Ports installed per year	6	8	0
Program Administration	Annual City budget	$150,000	$50,000	TBD
Level 2 O&M	Annual City budget	$66,000	$268,800	$390,000
DCFC O&M	Annual City budget	$18,000	$81,000	$102,000
City total	Annual City budget	$1,247,000	$2,185,000	$1,950,000
Total Investment Required	Annual total budget	$2,346,000	$5,616,000	$9,750,000

*Values may not sum due to rounding

Infrastructure Investment Scenario: 2021-2025

In this section, we present our recommendations for the City of Victoria's investment plan over the coming five years. For each intervention type, the total investment requirement is provided alongside the expected portion of the investment expected from the City as compared to other market actors (private industry, provincial and federal governments, utilities, etc.).

EV Ready Building Retrofit Investment

The EV ready building retrofit investment assumptions include the costs required to electrify existing multi-residential buildings so that they are 'EV-Ready' using a comprehensive approach, after which private actors – including building or apartment unit owners – can install level 2 chargers without further upgrades to the electrical system.

Total Investment: $6.34 million

Estimated City Investment: $1.27 million

Number of Retrofitted EV Ready Stalls: 5,280

Under the near-term infrastructure investment scenario, approximately $1.27 million of City investment in 'EV Ready' retrofits (not including the cost of level 2 chargers) is expected be required by 2025, equivalent to 5,281 EV Ready stalls.

Level 2 Public and Workplace Charging Investment

Level 2 public and workplace charging infrastructure can enable EV adoption for those with limited or no home charging, a portion of which are estimated to consider public or workplace charging an acceptable substitute for home charging. City investments in level 2 infrastructure are estimated at $1.55 million, equivalent to approximately 448 ports.

Total Investment: $3.10 million

Estimated City Investment: $1.55

Number of Ports: 448

DCFC Public Charging Investment

Under this scenario, $2.38 million of City investment is required – equivalent to 27 ports – to meet rapid on-the-go charging needs of EV drivers.

Total Investment: $4.73 million

Estimated City Investment: $2.36 million

Number of Ports: 27

Infrastructure Investment Scenario: 2026-2030

For the period from 2026 to 2030, the focus of the City's investments should shift towards tackling the existing building stock and improving home charging access. That said, the investment recommendations for this period should be seen as preliminary, and they should be adapted based on lessons learned from the first period.

EV Ready Building Retrofit Investment

Under the 2026-2030 infrastructure investment scenario, EV Ready retrofits are greatly scaled up as programs expand to reach a greater number of buildings. Approximately $8.48 million of City investment for EV Ready retrofits expected be required, equivalent to an additional 35,342 stalls

Total Investment: $42.41 million

Estimated City Investment: $8.48 million

Number of Retrofitted EV Ready Stalls: 35,343

Level 2 Public and Workplace Charging Investment

The initial focus on public charging infrastructure in the first half of the study reduces the spend required for level 2 installations over the 2026-2030 period. Approximately $675,000 of City investment is required, equivalent to 195 ports.

Total Investment: $1.40

Estimated City Investment: $699,000

Number of Ports: 202

DCFC Public Charging Investment

As with level 2 infrastructure, investments in DCFC chargers are greatly reduced during the 2026-2030 period thanks to early progress made during the first period. Approximately $565,000 of City investment is required, equivalent to 6 ports.

Total Investment: $1.23 million

Estimated City Investment: $613,000

Number of Ports: 7

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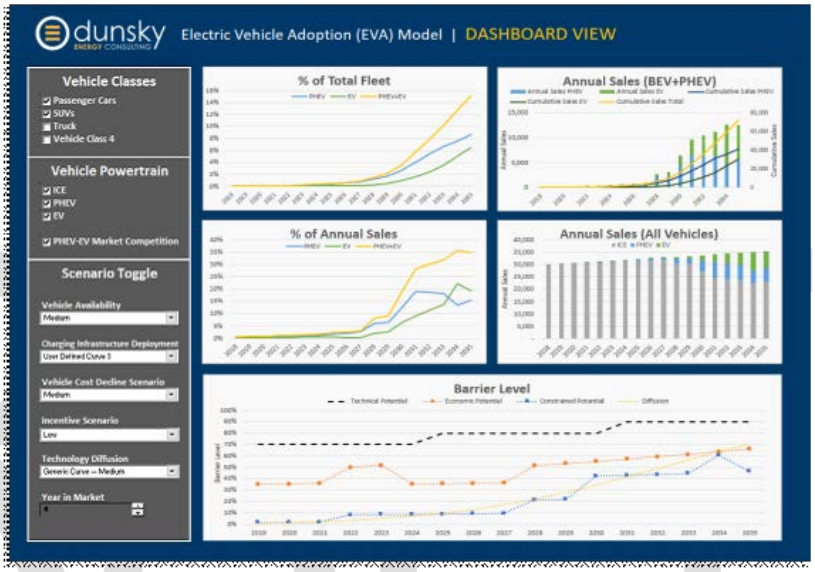
EVA Methodology

With such a complicated electric mobility landscape, it can be hard to determine the best strategies for accelerating adoption. Dunsky's EVA Model was developed in-house to address a growing need by our clients to understand the potential size of the electric vehicle market in their respective jurisdictions and corresponding impacts. Based on rigorous review of research from academia and industry, EVA leverages the modeling framework behind Dunsky's Solar Adoption Model (SAM) and builds on the knowledge base and expertise from our EV practice. EVA projects market adoption of EVs based on several key factors:



Sample EVA Dashboard View

- **Technical potential:** The theoretical potential for deployment based on the size and composition of the overall vehicle market, as well as availability of different powertrain types (e.g. plug-in hybrid, battery electric) in different vehicle classes (e.g. cars, SUVs, trucks, buses, etc.).
- **Customer economics:** The unconstrained economic potential based on incremental Total Cost of Ownership (TCO) of electric vehicles over conventional vehicles, taking into account forecasted energy costs, annual vehicle-miles travelled, and forecasted battery and vehicle costs.
- **Market constraints:** Accounting for EV-specific barriers including range limitations and access to charging infrastructure, and how various approaches to infrastructure deployment can address these barriers.
- **Market dynamics:** Incorporating technology diffusion theory and other market factors to determine rate of adoption and competition between vehicle types.

By quantifying the impact of these various factors, EVA allows us to not only provide our clients with jurisdiction-specific forecasts for EV adoption, but also to assess the effectiveness of a range of policy and program options for accelerating EV adoption, such as financial incentives and charging infrastructure deployment. EVA also allows us to assess the impact of the electrical load growth associated with an increasingly electrified transportation sector, helping those working in the energy industry to plan ahead for this transition and put solutions into place that can help to manage this load growth in the most effective way.

Market Assumptions

Vehicle Assumptions

Vehicle Market Total Fleet and New Sales Assumptions[12]

		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cars	Total fleet	26,663	26,114	25,576	25,049	24,533	24,028	23,533	23,048	22,574	22,109
	New sales	1,386	1,358	1,330	1,303	1,276	1,249	1,224	1,199	1,174	1,150
SUVs	Total fleet	13,061	13,736	14,446	15,193	15,979	16,805	17,674	18,587	19,549	20,559
	New sales	793	834	877	923	971	1,021	1,073	1,129	1,187	1,249
Trucks	Total fleet	1,513	1,635	1,767	1,910	2,064	2,231	2,411	2,606	2,817	3,045
	New sales	79	85	92	99	107	116	125	136	146	158

Building Stock Assumptions

Forecasted Number of Dwelling Units by Housing Type[13]

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Single detached	6,433	6,399	6,364	6,330	6,296	6,262	6,229	6,195	6,162	6,129
Semi-detached	1,248	1,250	1,253	1,255	1,258	1,261	1,263	1,266	1,268	1,271
Row	2,336	2,359	2,383	2,406	2,430	2,454	2,479	2,503	2,528	2,553
Apartment and other	38,380	38,918	39,464	40,018	40,579	41,148	41,726	42,311	42,905	43,506

Forecasted Annual New Construction Units by Housing Type[14]

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Single detached	29	29	29	28	28	28	28	28	28	27
Semi-detached	13	13	13	13	13	13	13	13	13	13
Row	11	11	11	11	11	11	11	12	12	12
Apartment and other	548	556	564	571	579	588	596	604	613	621

Forecasted Parking Stalls by Housing Type

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Single detached	6,433	6,399	6,364	6,330	6,296	6,262	6,229	6,195	6,162	6,129
Semi-detached	1,248	1,250	1,253	1,255	1,258	1,261	1,263	1,266	1,268	1,271

[12] To forecast the total light-duty vehicle population, historic population and ICBC vehicle registration data were used to develop a historic car/population ratio. This ratio was then combined with forecasted population to estimate total light duty vehicles over the study period. To capture the split of cars, SUVs, and trucks within the light-duty vehicle population over time, historic trends were developed using the split found in the 2015-2019 ICBC registration data. These trends were then extrapolated out over the study period. Annual sales were forecasted using province-wide sales as a percent of fleet data from the Canadian comprehensive energy use database in combination with fleet forecasts.

[13] The average annual growth in units was calculated using 2011 and 2016 StatsCan census data for each building type. These rates were used to estimate the total units for each year.

[14] Using historic data from the Canadian Mortgage and Housing Corporation on the annual number of new home completions in Victoria, the rate of new construction as a percent of existing building stock was estimated for each building type. These rates were used to forecast the annual number of new construction units.

Row	2,871	2,894	2,918	2,943	2,967	2,992	3,017	3,042	3,068	3,094
Apartment and other	48,322	48,786	49,257	49,734	50,218	50,708	51,206	51,710	52,222	52,740

Assumed Portion of Existing Stalls Requiring EV Ready Retrofit by Housing Type

Single detached	25%
Semi-detached	30%
Row	60%
Apartment and other	91%

Infrastruction Assumptions

Cumulative and Annual Stalls Retrofit to be EV Ready

		2022	2023	2024	2025	2026	2027	2028	2029	2030
Infrastructure Investment Scenario	Annual	445	772	1,219	2,844	4,062	6,906	8,125	8,125	8,125
	Cumulative	445	1,217	2,436	5,280	9,342	16,248	24,373	32,498	40,623

Assumed % of Stalls with Access[15]

		2022	2023	2024	2025	2026	2027	2028	2029	2030
Baseline Scenario	Single detached	76%	76%	77%	77%	78%	78%	79%	79%	80%
	Semi-detached	72%	73%	74%	75%	76%	77%	78%	79%	80%
	Row	41%	41%	42%	42%	43%	43%	44%	44%	44%
	Apartment and other	12%	14%	15%	16%	18%	19%	20%	22%	23%
Infrastructure Investment Scenario	Single detached	80%	82%	85%	87%	90%	92%	95%	97%	100%
	Semi-detached	77%	80%	83%	85%	88%	91%	94%	97%	100%
	Row	53%	59%	65%	71%	77%	83%	89%	94%	100%
	Apartment and other	15%	18%	24%	31%	40%	55%	70%	85%	100%

[15] 'Access' is defined as those who have charging at home, or those who have the ability to install a level 2 charger without major retrofits. The budget included in the body of the report accounts for the costs associated with retrofitting multifamily units to be EV ready but does not account for the costs for single-family dwellings (including single detached, semi-detached, and row housing) that require retrofits. This assumes that most residents of single-family dwellings are willing to cover the required investment. Under the baseline scenario, it is assumed that single family access grows moderately over time (0.5% per year). Under the infrastructure investment scenario, it is assumed that single family access grows more aggressively over time (2.5% per year), keeping access levels in-line with multi-residential units, reflecting the likely competition in the rental market.

Assumed % of Dwelling Units with Access[16]

		2022	2023	2024	2025	2026	2027	2028	2029	2030
Baseline Scenario	Single detached	76%	76%	77%	77%	78%	78%	79%	79%	80%
	Semi-detached	72%	73%	74%	75%	76%	77%	78%	79%	80%
	Row	41%	41%	42%	42%	43%	43%	44%	44%	44%
	Apartment and other	11%	12%	13%	15%	16%	17%	18%	19%	21%
Infrastructure Investment Scenario	Single detached	80%	82%	85%	87%	90%	92%	95%	97%	100%
	Semi-detached	77%	80%	83%	85%	88%	91%	94%	97%	100%
	Row	53%	59%	65%	71%	77%	83%	89%	94%	100%
	Apartment and other	13%	16%	21%	28%	36%	49%	62%	76%	89%

Level 2 Charging Infrastructure Assumptions (Cumulative Number of Ports)

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Baseline	76	76	76	76	76	76	76	76	76
Infrastructure Investment	186	297	408	524	635	726	726	726	726

DCFC Charging Infrastructure Assumptions (Cumulative Number of Ports)

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Baseline	0	0	0	0	0	0	0	0	0
Infrastructure Investment	6	12	19	27	34	34	34	34	34

Infrastructure Cost Assumptions

EV Ready Retrofit ($ per stall)	$1,200
Level 2 curbside ($ per port)	$15,000
Level 2 in parkade ($ per port)	$5,000
DCFC ($ per port)	$175,000

[16] Note that the number of stalls with access is greater than the number of units with access for the 'Apartment and other' housing type due to the assumption that approximately 11% of units do not have a parking stall.

Detailed Adoption Results

Baseline Adoption Forecast

			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
High	Cumulative Vehicles	PHEV	291	473	732	1,037	1,357	1,673	1,992	2,342	2,723	3,134
		BEV	814	968	1,181	1,423	1,671	1,903	2,125	2,359	2,608	2,872
		Total	1,105	1,441	1,913	2,460	3,027	3,576	4,117	4,701	5,331	6,006
	% of Annual Sales	PHEV	5%	8%	11%	13%	14%	13%	13%	14%	15%	16%
		BEV	5%	7%	9%	10%	11%	10%	9%	9%	10%	10%
		Total	10%	15%	21%	24%	24%	23%	22%	24%	25%	26%
	% of Fleet	PHEV	1%	1%	2%	2%	3%	4%	5%	5%	6%	7%
		BEV	2%	2%	3%	3%	4%	4%	5%	5%	6%	6%
		Total	3%	3%	5%	6%	7%	8%	9%	11%	12%	13%
Mid	Cumulative Vehicles	PHEV	267	407	591	801	1,033	1,276	1,536	1,818	2,126	2,458
		BEV	786	900	1,047	1,207	1,381	1,555	1,732	1,917	2,115	2,327
		Total	1,053	1,306	1,638	2,009	2,414	2,831	3,269	3,736	4,241	4,785
	% of Annual Sales	PHEV	4%	6%	8%	9%	10%	10%	11%	11%	12%	13%
		BEV	4%	5%	6%	7%	7%	7%	7%	8%	8%	8%
		Total	8%	11%	14%	16%	17%	17%	18%	19%	20%	21%
	% of Fleet	PHEV	1%	1%	1%	2%	2%	3%	4%	4%	5%	5%
		BEV	2%	2%	3%	3%	3%	4%	4%	4%	5%	5%
		Total	3%	3%	4%	5%	6%	7%	7%	8%	9%	10%
Low	Cumulative Vehicles	PHEV	238	345	485	646	823	1,013	1,216	1,434	1,668	1,923
		BEV	757	840	945	1,061	1,184	1,312	1,444	1,584	1,729	1,885
		Total	994	1,185	1,431	1,706	2,007	2,325	2,660	3,018	3,397	3,808
	% of Annual Sales	PHEV	4%	5%	6%	7%	8%	8%	8%	9%	9%	10%
		BEV	3%	4%	5%	5%	5%	5%	5%	6%	6%	6%
		Total	6%	8%	11%	12%	13%	13%	14%	15%	15%	16%
	% of Fleet	PHEV	1%	1%	1%	2%	2%	2%	3%	3%	4%	4%
		BEV	2%	2%	2%	3%	3%	3%	3%	4%	4%	4%
		Total	2%	3%	3%	4%	5%	5%	6%	7%	8%	8%

Infrastructure Investment Forecast

			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
High	Cumulative Vehicles	PHEV	321	503	737	979	1,243	1,515	1,809	2,141	2,507	2,903
		BEV	837	1,149	1,695	2,444	3,243	4,070	4,960	5,964	7,067	8,262
		Total	1,158	1,652	2,432	3,423	4,486	5,585	6,769	8,105	9,574	11,165
	% of Annual Sales	PHEV	6%	8%	10%	10%	11%	11%	12%	13%	15%	15%
		BEV	5%	14%	24%	32%	34%	35%	37%	41%	44%	47%
		Total	12%	22%	34%	43%	45%	46%	49%	54%	59%	62%
	% of Fleet	PHEV	1%	1%	2%	2%	3%	4%	4%	5%	6%	6%
		BEV	2%	3%	4%	6%	8%	9%	11%	13%	16%	18%
		Total	3%	4%	6%	8%	11%	13%	16%	18%	21%	24%
Mid	Cumulative Vehicles	PHEV	292	434	600	772	988	1,251	1,553	1,872	2,195	2,524
		BEV	805	1,030	1,408	1,906	2,418	2,943	3,525	4,216	5,013	5,912
		Total	1,097	1,464	2,008	2,678	3,407	4,194	5,078	6,088	7,208	8,436
		PHEV	5%	6%	7%	7%	9%	11%	12%	13%	13%	13%

	% of Annual Sales	BEV	4%	10%	16%	21%	22%	22%	24%	28%	32%	35%
		Total	10%	16%	24%	29%	31%	33%	36%	41%	45%	48%
	% of Fleet	PHEV	1%	1%	1%	2%	2%	3%	4%	4%	5%	6%
		BEV	2%	2%	3%	5%	6%	7%	8%	10%	11%	13%
		Total	3%	4%	5%	6%	8%	10%	12%	14%	16%	18%
Low	Cumulative Vehicles	PHEV	257	384	550	754	1,001	1,290	1,611	1,958	2,328	2,722
		BEV	772	921	1,157	1,453	1,746	2,034	2,345	2,713	3,139	3,632
		Total	1,029	1,304	1,707	2,207	2,747	3,324	3,956	4,671	5,467	6,354
	% of Annual Sales	PHEV	4%	6%	7%	9%	11%	12%	13%	14%	15%	15%
		BEV	3%	7%	10%	13%	12%	12%	13%	15%	17%	19%
		Total	7%	12%	18%	21%	23%	24%	26%	29%	32%	35%
	% of Fleet	PHEV	1%	1%	1%	2%	2%	3%	4%	4%	5%	6%
		BEV	2%	2%	3%	3%	4%	5%	5%	6%	7%	8%
		Total	2%	3%	4%	5%	6%	8%	9%	11%	12%	14%

Infrastructure Investment + Incentives Forecast

			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
High	Cumulative Vehicles	PHEV	321	503	737	998	1,323	1,701	2,126	2,593	3,094	3,623
		BEV	837	1,149	1,695	2,502	3,487	4,635	5,925	7,336	8,848	10,445
		Total	1,158	1,652	2,432	3,501	4,810	6,336	8,050	9,929	11,942	14,068
	% of Annual Sales	PHEV	6%	8%	10%	11%	14%	16%	18%	19%	20%	21%
		BEV	5%	14%	24%	35%	42%	48%	53%	57%	60%	62%
		Total	12%	22%	34%	46%	56%	64%	71%	76%	80%	83%
	% of Fleet	PHEV	1%	1%	2%	2%	3%	4%	5%	6%	7%	8%
		BEV	2%	3%	4%	6%	8%	11%	14%	17%	20%	23%
		Total	3%	4%	6%	8%	11%	15%	18%	22%	27%	31%
Mid	Cumulative Vehicles	PHEV	292	434	600	778	1,007	1,297	1,641	2,030	2,452	2,909
		BEV	805	1,030	1,408	1,955	2,627	3,433	4,381	5,470	6,692	8,041
		Total	1,097	1,464	2,008	2,733	3,634	4,730	6,023	7,500	9,145	10,950
	% of Annual Sales	PHEV	5%	6%	7%	8%	10%	12%	14%	16%	17%	18%
		BEV	4%	10%	16%	24%	29%	34%	39%	44%	49%	53%
		Total	10%	16%	24%	31%	38%	46%	53%	60%	66%	71%
	% of Fleet	PHEV	1%	1%	1%	2%	2%	3%	4%	5%	5%	6%
		BEV	2%	2%	3%	5%	6%	8%	10%	12%	15%	18%
		Total	3%	4%	5%	6%	9%	11%	14%	17%	20%	24%
Low	Cumulative Vehicles	PHEV	257	384	550	752	993	1,265	1,557	1,865	2,191	2,546
		BEV	772	921	1,157	1,489	1,899	2,398	2,985	3,657	4,406	5,242
		Total	1,029	1,304	1,707	2,242	2,892	3,663	4,543	5,522	6,597	7,787
	% of Annual Sales	PHEV	4%	6%	7%	9%	10%	11%	12%	13%	13%	14%
		BEV	3%	7%	10%	14%	17%	21%	24%	27%	30%	33%
		Total	7%	12%	18%	23%	28%	32%	36%	40%	43%	47%
	% of Fleet	PHEV	1%	1%	1%	2%	2%	3%	4%	4%	5%	6%
		BEV	2%	2%	3%	4%	4%	6%	7%	8%	10%	11%
		Total	2%	3%	4%	5%	7%	9%	10%	12%	15%	17%

Annual Investment

Annual Total and City Budgets, 2022-2025

		2022	2023	2024	2025
Total Annual Budget	EV Ready Retrofits	$486,000	$926,400	$1,462,800	$3,412,800
	Level 2	$623,077	$768,462	$768,462	$803,077
	DCFC	$875,000	$1,050,000	$1,225,000	$1,400,000
	Total	$1,984,077	$2,744,862	$3,456,262	$5,615,877
City Annual Budget	EV Ready Retrofits	$106,800	$185,280	$292,560	$682,560
	Level 2	$380,769	$384,231	$384,231	$401,538
	DCFC	$525,000	$525,000	$612,500	$700,000
	Program Administration	$150,000	$50,000	$50,000	$50,000
	Level 2 O&M	$66,000	$132,600	$199,200	$268,800
	DCFC O&M	$18,000	$36,000	$57,000	$81,000
	Total	$1,246,569	$1,313,111	$1,595,491	$2,183,898

Annual Total and City Budgets, 2026-2030

		2026	2027	2028	2029	2030
Total Annual Budget	EV Ready Retrofits	$4,874,400	$8,287,200	$9,750,000	$9,750,000	$9,750,000
	Level 2	$768,462	$630,000	$-	$-	$-
	DCFC	$1,225,000	$-	$-	$-	$-
	Total	$6,867,862	$8,917,200	$9,750,000	$9,750,000	$9,750,000
City Annual Budget	EV Ready Retrofits	$974,880	$1,657,440	$1,950,000	$1,950,000	$1,950,000
	Level 2	$384,231	$315,000	$0	$0	$0
	DCFC	$612,500	$0	$0	$0	$0
	Program Administration	TBD	TBD	TBD	TBD	TBD
	Level 2 O&M	$335,400	$390,000	$390,000	$390,000	$390,000
	DCFC O&M	$102,000	$102,000	$102,000	$102,000	$102,000
	Total	$2,409,011	$2,464,440	$2,442,000	$2,442,000	$2,442,000

dunsky

DRAFT

Electric Vehicle Strategy

Committee of the Whole
May 20, 2021

CITY OF VICTORIA

1

Purpose

The purpose of this report is to share the directions contained within the draft City of Victoria Electric Vehicle Strategy.

This presentation will provide an overview of:

- City's Climate Leadership Goals
- Victoria's current EV context
- The process followed to develop the EV Strategy
- EV Strategy recommendations

2

Climate Leadership Plan

- CLP Target: 30% of passenger vehicles are renewably powered by 2030

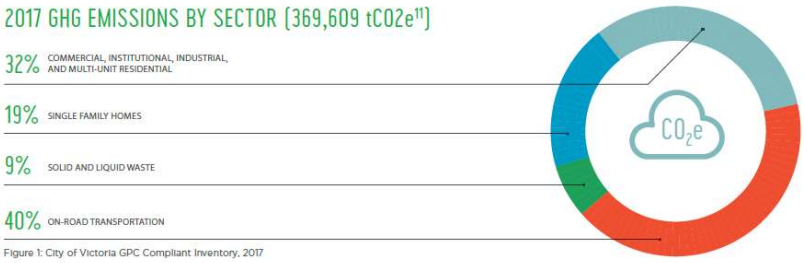
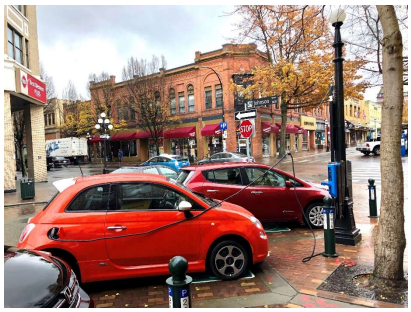
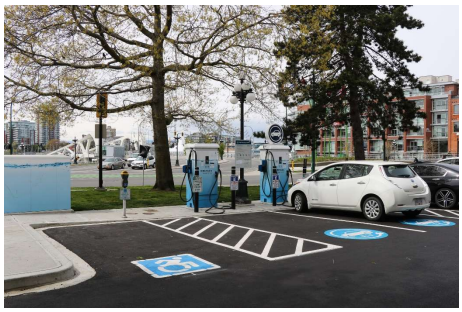


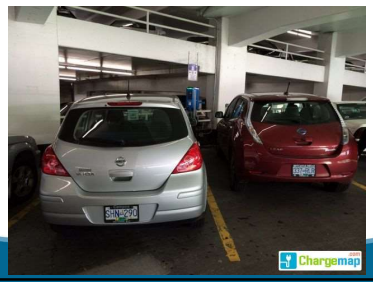
Figure 1: City of Victoria GPC Compliant Inventory, 2017

3

City's EV Charging Network







4

Victoria's EV Context

- At 13% of new sales, Victoria has the highest rate of EV sales in Canada.

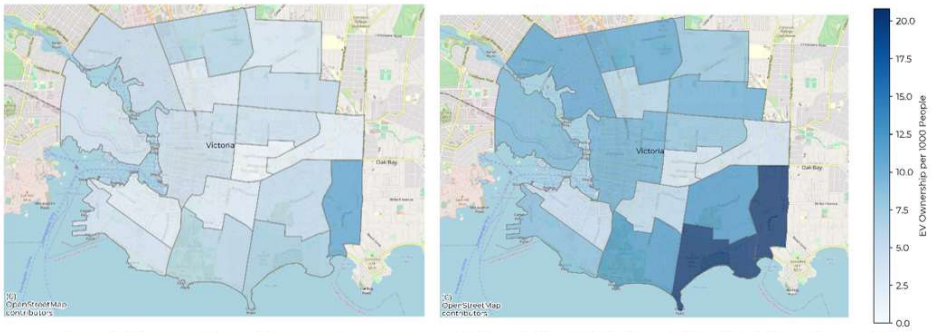
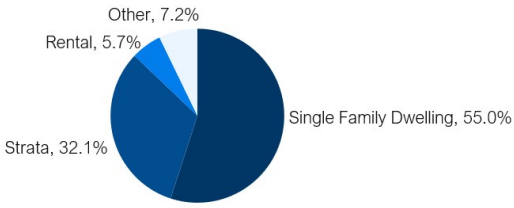


Figure 5: EV ownership per 1000 people by census tract in Victoria for 2018 (left) and 2020 (right). (Data Source: [3])

Victoria's Current EV Context



EV Ownership by Housing Type

GOVICTORIA

clean, seamless mobility options for everyone

Forecasting (business-as-usual)

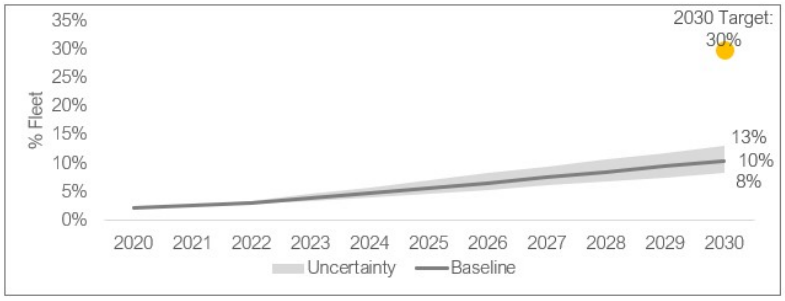
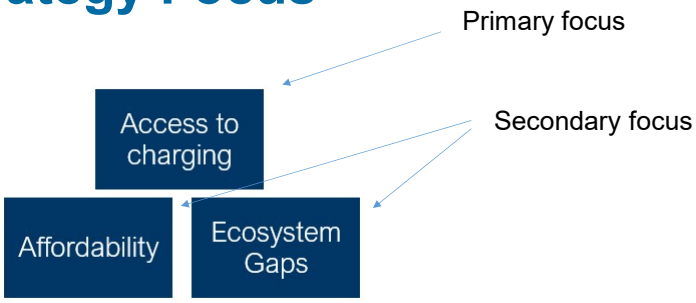


Figure 5 Victoria's business-as-usual EV adoption in comparison to the 2030 target

- Business-as-usual scenario leaves the City 20% shy of target.

EV Strategy Focus



- The primary focus of the EV Strategy is improving access to EV charging for Victoria residents.

Expanding Access to Charging

Public Charging Network		Incentives
Level 2 Charging (650 charging ports)	DC Fast Charging (34 charging ports)	EV Ready Retrofits (40,000 parking stalls)
Global Investment $4.5 M	Global Investment $6 M	Global Investment $49.5 M
City Investment $2.25 M	City Investment $3 M	City Investment $9.75 M

Short term focus ← | → Long term focus

9

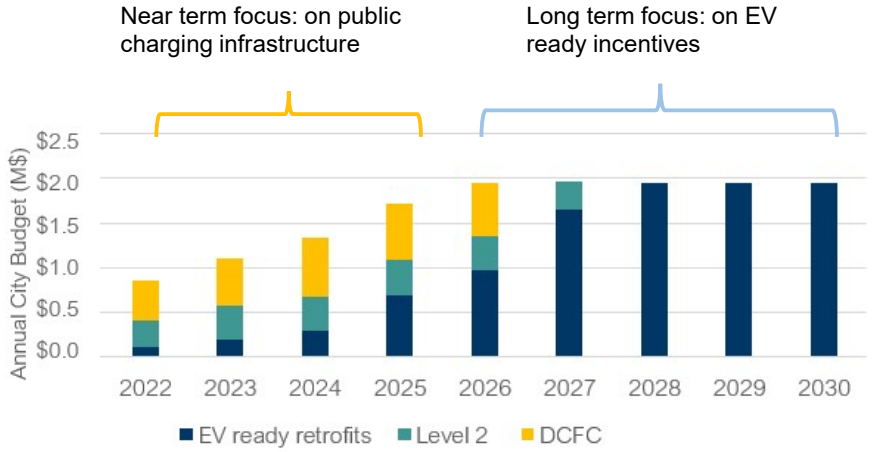
Victoria's Future EV Context

EV Ecosystem:
- EV Technology
- Fed/Provincial Policy/regulations
- Vehicle costs/used market

Mobility:
- Car ownership
- Parking policy/rates
- Shared mobility

10

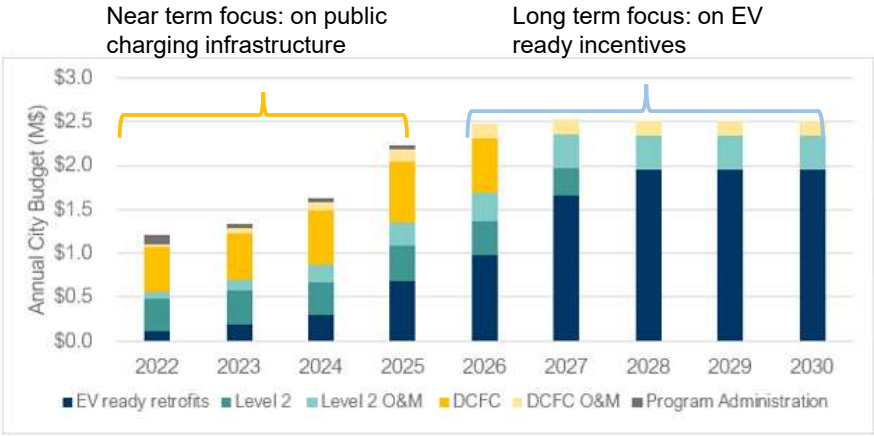
EV Infrastructure Investment Profile



Electric Vehicle Strategy

11

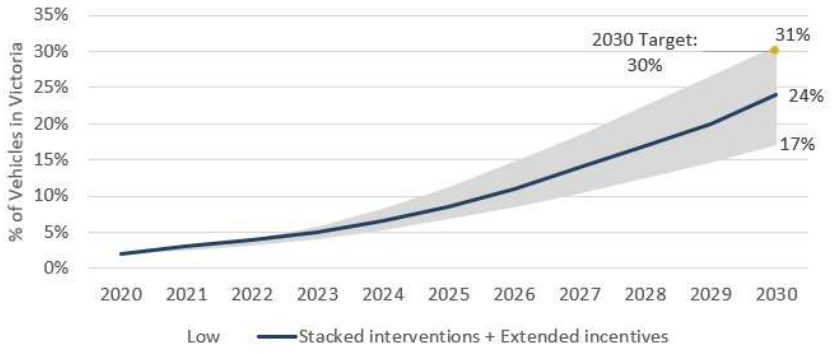
EV Infrastructure Investment Profile



Electric Vehicle Strategy

12

Projected EV Adoption



Expand on this…

13

Policy Integration

Potential Policy or Initiative	Objectives
Invest in public Level 2 EV infrastructure and DC Fast Charging	**Environment:** Through supporting adoption of EVs this investment also supports clean transportation goals of OCP, Climate Leadership Plan and GoVictoria. **Equity:** Provides convenient, fast charging to users without access to charging at home. Locating multiple chargers in a single hub can support a larger volume of EV drivers as adoption increases. **Economic Development:** On-street Level 2 and DCFC can support opportunity charging. Access to such charging may be particularly important for ride-hailing, taxis, and other high-mileage vehicles. **Affordability:** Supports access to transportation with low operating and maintenance costs to all city residents.
Invest in EV Ready Infrastructure	**Environment:** Supports clean transportation goals of OCP, Climate Leadership Plan and GoVictoria. **Equity:** Provides an opportunity to access home EV charging to all City residents rather than just those in single family homes or new multi-family buildings. **Economic Development:** Retrofitting will support growth in clean tech businesses and regional electrical contractors.
Advocacy to other orders of Government	**Environment:** The City of Victoria's targets are aligned to support the Paris Agreement and deliver on the commitments made to address the Climate Emergency. **Affordability**: In some areas City targets are more ambitious than those of other orders of government. Advocating for stronger Provincial and Federal emission reduction targets may result in additional government regulations and investments by others reducing the need for municipal investment.

14

Recommendations

That Council:

a) Receive the draft *City of Victoria Electric Vehicle Strategy* to support implementation of the Climate Leadership Plan for information (Appendix B).
b) Receive the draft *Electric Vehicle Strategy Technical Report* for information (Appendix C).
c) Direct staff to bring forward a 5 year capital plan including a budget request for 2022 as part of the 2022 Financial Planning process that is aligned with this strategy to support delivery of targets identified in the Climate Leadership Plan and Go Victoria.
d) Direct staff to bring back the final version of the City of Victoria Electric Vehicle Strategy for approval in Q4 2021.

Committee of the Whole Report
For the Meeting of May 20, 2021

To:	Committee of the Whole	**Date:**	May 11, 2021
From:	Curt Kingsley, City Clerk		
Subject:	Intergenerational Day Canada – June 1, 2021		

RECOMMENDATION

That the *Intergenerational Day Canada* Proclamation be forwarded to the May 20, 2021 Council meeting for Council's consideration.

EXECUTIVE SUMMARY

Attached as Appendix A is the requested *Intergenerational Day Canada* Proclamation. Council has established a policy addressing Proclamation requests. The policy provides for:

- A staff report to Committee of the Whole.
- Each Proclamation request requiring a motion approved at Committee of the Whole prior to forwarding it to Council for their consideration.
- Staff providing Council with a list of Proclamations made in the previous year.
- Council voting on each Proclamation individually.
- Council's consideration of Proclamations is to fulfil a request rather than taking a position.

A list of 2020 Proclamations is provided as Appendix B in accordance with the policy. Consistent with City Policy, Proclamations issued are established as fulfilling a request and does not represent an endorsement of the content of the Proclamation.

Respectfully submitted,

Curt Kingsley
City Clerk

List of Attachments

- Appendix A: Proclamation “Intergenerational Day Canada”
- Appendix B: List of Previously Approved Proclamations

CITY OF VICTORIA

PROCLAMATION

"INTERGENERATIONAL DAY CANADA"

WHEREAS *Intergenerational Day Canada June 1st raises awareness about the power of making simple, respectful intergenerational connections; and*

WHEREAS *Intergenerational Day Canada, June 1st is a day to focus on the profound positive influence intergenerational connecting has on eliminating isolation and loneliness, moving towards healthy, all-age friendly communities; and*

WHEREAS *Intergenerational Day Canada, June 1st celebrates the good things presently taking place between generations in local community; and*

WHEREAS *Intergenerational Day Canada, June 1st encourages simple, fun intergenerational sharing; and*

WHEREAS *Intergenerational Day Canada, June 1st is an official reminder, a yearly invitation for every citizen to take one small respectful step to bridge generations within his or her local community; and*

WHEREAS *It only takes a smile between generations to break through isolation and loneliness, the number one health concern for children/youth and older persons.*

NOW, THEREFORE *I do hereby proclaim Tuesday, June 1st, 2021 as "**INTERGENERATIONAL DAY CANADA**" on the HOMELANDS of the Lekwungen speaking **SONGHEES AND ESQUIMALT PEOPLE** in the **CITY OF VICTORIA, CAPITAL CITY** of the **PROVINCE** of **BRITISH COLUMBIA.***

IN WITNESS WHEREOF*, I hereunto set my hand this 20th day of May, Two Thousand and Twenty-One.*

LISA HELPS
MAYOR
CITY OF VICTORIA
BRITISH COLUMBIA

Sponsored By:
Sharon MacKenzie
i2i Intergenerational Society

Appendix B

Council Meetings	Proclamations
9-Jan-20	Crime Stoppers Month - January 2020
23-Jan-20	International Day of Zero Tolerance for Female Genital Mutilation - February 6, 2020 Eating Disorder Awareness Week - February 1 to 7, 2020
13-Feb-20	Heritage Week 2020 - February 17 to 23, 2020 British Isles Historic Festival Day - February 22, 2020 Chamber of Commerce Week - February 17 to 21, 2020
27-Feb-20	International Women's Day and Week - March 8, 2020 and March 8 to 15, 2020 Tibet Day - March 10, 2020
12-Mar-20	Purple Day - March 26, 2020 World Down Syndrome Day - March 21, 2020 Parkinson's Awareness Month - April 2020
9-Apr-20	Human Values Day - April 24, 2020 Melanoma Awareness Month - May 2020
23-Apr-20	Global Love Day - May 1, 2020 Apraxia Awareness Day - May 14, 2020
14-May-20	National Missing Children's Month and Missing Children's Day - May 2020 and May 25, 2020 Falun Dafa Day - May 13, 2020 Do Something Good For Your Neighbour Day - May 16, 2020
28-May-20	Honouring the National Day of the Republic of Azerbaijan - May 28, 2020 National Accessibility Week - May 31, 2020
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25-Jun-20	Pride Week - June 28 to July 5, 2020 Parachute National Injury Prevention Day - Jul 6, 2020
23-Jul-20	World PVNH Disorder Awareness Day - August 7, 2020 Hibashuka Remembrance Week - August 2 to 9, 2020
6-Aug-20	National Polycystic Kidney Disease Awareness Day - September 4, 2020 Mitochondrial Disease Awareness Week – September 13 to 19, 2020 International Overdose Awareness Day – August 31, 2020
3-Sep-20	United Way Month - September 2020 Jaswant Singh Khalra Day - September 6, 2020
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3-Dec-20	National Day of Remembrance and Action on Violence Against Women - December 6, 2020

Committee of the Whole Report
For the Meeting of May 20, 2021

To:	Committee of the Whole	**Date:**	May 11, 2021
From:	Curt Kingsley, City Clerk		
Subject:	World Refugee Day – June 20, 2021		

RECOMMENDATION

That the *World Refugee Day* Proclamation be forwarded to the May 20, 2021 Council meeting for Council's consideration.

EXECUTIVE SUMMARY

Attached as Appendix A is the requested *World Refugee Day* Proclamation. Council has established a policy addressing Proclamation requests. The policy provides for:

- A staff report to Committee of the Whole.
- Each Proclamation request requiring a motion approved at Committee of the Whole prior to forwarding it to Council for their consideration.
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Respectfully submitted,

Curt Kingsley
City Clerk

List of Attachments

- Appendix A: Proclamation “World Refugee Day”
- Appendix B: List of Previously Approved Proclamations

CITY OF VICTORIA

PROCLAMATION

"WORLD REFUGEE DAY"

WHEREAS *World Refugee Day, 20 June every year, is dedicated to bringing attention to the plight of the world's refugees; and the City of Victoria is extremely proud of our long, successful history of welcoming, settling, retaining, and continuing to welcome refugees to our community; and*

WHEREAS *Canada is signatory to the 1951 Convention and its 1967 Protocol; and*

WHEREAS *in 2000, the United Nations General Assembly established June 20th as World Refugee Day; Since 2001. people have celebrated the day with events that honour the world's nearly 26 million refugees and raise awareness around refugee issues; and*

WHEREAS *on 20 June 2021, the City of Victoria and its people join the rest of the world as they commemorate the strength, courage, and resilience of millions of refugees.*

NOW, THEREFORE *I do hereby proclaim Sunday June 20th, 2021 as "**WORLD REFUGEE DAY**" on the HOMELANDS of the Lekwungen speaking **SONGHEES AND ESQUIMALT PEOPLE** in the **CITY OF VICTORIA, CAPITAL CITY** of the **PROVINCE** of **BRITISH COLUMBIA.***

IN WITNESS WHEREOF*, I hereunto set my hand this 20th day of May, Two Thousand and Twenty-One.*

LISA HELPS
MAYOR
CITY OF VICTORIA
BRITISH COLUMBIA

Sponsored By:
Ibrahim Hajibrahim
World Refugee Day Committee

Appendix B

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3-Dec-20	National Day of Remembrance and Action on Violence Against Women - December 6, 2020

Committee of the Whole Report
For the Meeting of May 20, 2021

To:	Committee of the Whole	**Date:**	May 17, 2021
From:	Curt Kingsley, City Clerk		
Subject:	Action Anxiety Day – June 10, 2021		

RECOMMENDATION

That the *Action Anxiety Day* Proclamation be forwarded to the June 3, 2021 Council meeting for Council's consideration.

EXECUTIVE SUMMARY

Attached as Appendix A is the requested *Action Anxiety Day* Proclamation. Council has established a policy addressing Proclamation requests. The policy provides for:

- A staff report to Committee of the Whole.
- Each Proclamation request requiring a motion approved at Committee of the Whole prior to forwarding it to Council for their consideration.
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Respectfully submitted,

Curt Kingsley
City Clerk

List of Attachments

- Appendix A: Proclamation “Action Anxiety Day”
- Appendix B: List of Previously Approved Proclamations

CITY OF VICTORIA

PROCLAMATION

"ACTION ANXIETY DAY"

WHEREAS *June 10, 2021 has been declared the first World Anxiety Day, to be known as Action Anxiety Day – an annual awareness and education day created in Vancouver, British Columbia, Canada by Anxiety Canada; and*

WHEREAS *Prior to the COVID-19 pandemic, at least 18 % of Canadians and up to 5.8% of the world population were affected by anxiety disorders, with women being impacted nearly twice as much as men; and*

WHEREAS *Anxiety disorders interfere with an individual's everyday activities that may include participation in work, school, and making social connections; and*

WHEREAS *Stigma and access to affordable treatment can be major barriers to individuals living life the way they want; and*

WHEREAS *Sharing evidence-based resources and engaging communities about anxiety and anxiety disorders can reduce stigma and improve the well-being of communities.*

NOW, THEREFORE *I do hereby proclaim Thursday, June 10th, 2021 as "**ACTION ANXIETY DAY**" on the HOMELANDS of the Lekwungen speaking **SONGHEES AND ESQUIMALT PEOPLE** in the **CITY OF VICTORIA, CAPITAL CITY** of the **PROVINCE** of **BRITISH COLUMBIA.***

IN WITNESS WHEREOF*, I hereunto set my hand this 3rd day of June, Two Thousand and Twenty-One.*

LISA HELPS
MAYOR
CITY OF VICTORIA
BRITISH COLUMBIA

Sponsored By:
ANXIETY CANADA

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Council Member Motion
For the Committee of the Whole Meeting of May 20, 2021

To:	Committee of the Whole	**Date:**	May 13, 2021
From:	Councillor Ben Isitt, Councillor Sharmarke Dubow and Councillor Sarah Potts		
Subject:	Support for Housing Outreach Pilot Project		

BACKGROUND

Council has received a request from the Quadra Village Community Centre (Attachment 1), supported by the Burnside-Gorge Community Association, the Fairfield Gonzales Community Association, the Fernwood Neighbourhood Resources Group, and the North Park Neighbourhood Association, for financial support for a Housing Outreach Pilot Project, to support residents from throughout the City of Victoria to secure housing and avoid homelessness.

These community associations have identified an increase in housing precarity since the onset of the Covid-19 pandemic, increased service calls at their offices requesting help connecting with housing options, and a corresponding increased risk of homelessness for residents. It is therefore recommended that Council support this pilot project by allocating a one-time grant to sustain the Housing Outreach Pilot Project for a period of 12 months.

RECOMMENDATION

That Council:

1. Authorizes a one-time grant of $60,000 to the Quadra Village Community Centre and partner agencies for the Housing Outreach Pilot Project, funded from the 2021 contingency.

2. Directs staff to finalize the terms of this allocation to the satisfaction of the City's Chief Financial Officer and Director of Sustainable Planning and Community Development, including ensuring access to this service for newcomers, Indigenous, Black, Asian and other persons of colour.

3. Requests that the Quadra Village Community Centre work with partner Community Associations to provide a final report to Council following completion of the pilot project.

Respectfully submitted,

Councillor Isitt Councillor Dubow Councillor Potts

Attachments:
1. Letter from Quadra Village Community Centre, May 11, 2021

Quadra Village Community Centre

Downtown Blanshard Advisory Committee (Est.1974)

901 Kings Rd. Victoria, BC V8T 1W5 T: 250. 388.7696 F: 250.388.7607

May 11, 2021

To: Mayor and Council, City of Victoria

Re: Critical Need for Housing Outreach Support Worker

Dear Mayor Helps and Councillors,

Quadra Village Community Centre and other Centres and Community Associations have encountered an overwhelming rise in the number of single people and couples that are losing their housing. In our experience, there is an intense need to rally resources and one to one support to attempt to find short and long term housing options, before folks end up living outside, in vehicles etc. While trying to support folks in whatever way we can, our organizations have been overwhelmed by this issue and feel like we are fighting a losing battle. The extremely difficult housing market is particularly difficult for individuals competing for the most affordable rentals in the city when they are contending with challenges like low literacy, limited support, social isolation and moderate anxiety and depression.

We believe that a Housing Outreach worker, employed through Quadra Village Community Centre and connected to the other Community Centres/Neighbourhood Associations will help increase the skillsets of staff and volunteers in those organizations. As well, it will offer the opportunity to provide tailored one to support to folks who don't meet current emergency housing definitions but are in peril of losing access to shelter. While, not keeping up, we have developed a great deal of experience in assisting single adults and couples in these situations. We believe that Quadra Village Community Centre is well situated to provide this critical service at this critical moment and the annual cost of service at $60,000 is a worthwhile investment.

Thanks for your consideration and please see the key components below.

Kelly Greenwell, Executive Director
Quadra Village Community Centre / Downtown Blanshard Advisory Committee
t. 250 388 7696 ext.221 e. kelly@quadravillagecc.com

Caring ~Inclusive~Respectful~Community

www.quadravillagecc.com

Quadra Village Community Centre

Downtown Blanshard Advisory Committee (Est.1974)

901 Kings Rd. Victoria, BC V8T 1W5 T: 250. 388.7696 F: 250.388.7607

Housing Outreach Worker Overview

The Issues:

- Single adults and couples losing their housing with limited time, opportunity (affordable housing stock), resources.
- Limited affordable market housing stock, long waits for affordable housing and narrow. definition of eligibility for emergency housing.
- People on the precipice of homelessness who lack the knowhow to navigate such a competitive housing market.
- Busy staff in Community Centres who have great relationships with folks in the community, but are busy with other mandates central to their roles.

The Solution:

- A QVCC practicum student gathers resources to help this new Housing Outreach Worker can hit the ground running.
- A housing outreach (worker, 1FTE) support pilot facilitated by QVCC with referrals from the other Community Centres and Neighbourhood Associations. It is basically trying to assist adults (single and couples)who are at risk of homelessness, couch surfing, newly homeless etc.
- Building and bridging the skills and confidence to get the process of finding housing started (and keep it going).
- Helping people navigate the housing system including locating low rent options and seeking long term solutions through waitlists.
- Raising awareness among Community Centre and Neighbourhood Association staff/volunteers in order to ensure that folks have easy access to information to provide housing access support at the neighbourhood level.

FAIRFIELD GONZALES
COMMUNITY ASSOCIATION
the place to connect

Mayor and Council
City of Victoria
1 Centennial Square
Victoria, BC V8W 1P6

May 14, 2021

To: Mayor and Council, City of Victoria

Re: Critical Need for Housing Outreach Support Worker

Dear Mayor Helps and Councillors,

Fairfield Gonzales Community Association has found over the years that there is a gap in services in Victoria for seniors, individuals and couples who are losing housing. It has been a common occurrence that an apartment building in Fairfield Gonzales is sold, or a group of tenants are renovicted, and there is often nowhere for these people to turn for help in finding new housing. While we do what we can to help, we do not have the expertise or resources to make an impact. We expect a surge in this need to continue as the effects of the pandemic continue to be felt, particularly in lower income demographics.

There is an intense need to rally resources and one to one support to attempt to find short and long term housing options, before folks end up living outside or in vehicles. While trying to support folks in whatever way we can, our organizations have been overwhelmed by this issue and feel like we are fighting a losing battle. The extremely inaccessible housing market is particularly challenging for individuals competing for the most affordable rentals in the city, when they are often contending with challenges like low literacy, limited support, social isolation and moderate anxiety and depression.

We believe that a Housing Outreach worker, employed through Quadra Village Community Centre and connected to the other Community Centres/Neighbourhood Associations will help increase the skillsets of staff and volunteers in those organizations. As well, it will offer the opportunity to provide tailored one to support to folks who don't meet current emergency housing definitions but are in peril of losing access to shelter. We believe that Quadra Village Community Centre is well situated to provide this critical service at this critical moment and the annual cost of service at $60,000 is a worthwhile investment.

1330 FAIRFIELD RD. VICTORIA, BC V8S 5J1
Tel. 250.382.4604 Fax 250.382.4613
www.fairfieldcommunity.ca
place@fairfieldcommunity.ca

Thank you for your consideration and please see the key components below.

Vanya McDonell
Co-Executive Director
t. [redacted] e. [redacted]

Housing Outreach Worker Overview

The Issues:

- Single adults and couples losing their housing with limited time, opportunity (affordable housing stock), resources.

- Limited affordable market housing stock, long waits for affordable housing and narrow definition of eligibility for emergency housing.

- People on the precipice of homelessness who lack the knowhow to navigate such a competitive housing market.

- Busy staff in Community Centres who have great relationships with folks in the community, but are busy with other mandates central to their roles.

The Solution:

- A QVCC practicum student gathers resources to help this new Housing Outreach Worker can hit the ground running.

- A housing outreach (worker, 1FTE) support pilot facilitated by QVCC with referrals from the other Community Centres and Neighbourhood Associations. It is basically trying to assist adults (single and couples)who are at risk of homelessness, couch surfing, newly homeless etc.

- Building and bridging the skills and confidence to get the process of finding housing started (and keep it going).

- Helping people navigate the housing system including locating low rent options and seeking long term solutions through waitlists.

- Raising awareness among Community Centre and Neighbourhood Association staff/volunteers in order to ensure that folks have easy access to information to provide housing access support at the neighbourhood level.

Re: Request for the City of Victoria to Support Housing Outreach
Attention: Mayor and Council
Date: May 14, 2021

Dear Mayor Helps and Councillors,

Over the past year, the North Park Neighbourhood Association has witnessed the impacts that homelessness has on personal and community wellbeing. We are eager to support the Quadra Village Community Centre's request for funding a one-time grant of $60,000 for a Housing Outreach Pilot Project. This request addresses several important parts of a complex problem: it addresses the need to prevent homelessness before it occurs, it highlights the fact that the most successful interventions to secure long term housing options involve a one-on-one approach and an intense rallying of resources, and it acknowledges that existing programs do not apply to everyone (such as some single adults, couples without children, and some seniors). A housing outreach worker will do just this. This would be an incredibly valuable resource to North Park as well as many other neighbourhoods.

Victoria's housing market is particularly difficult for individuals competing for the most affordable rentals when they are contending with challenges such as low literacy, limited support, social isolation, stigma, and moderate anxiety and depression. North Park residents have the potential to benefit dramatically from a dedicated housing outreach worker. North Park has the highest unemployment rate in the city (8.1), 52% of residents live in core housing need, 30% of adults, and 51% of seniors are low income based on the low income measure, and 79% of residents are renters - many of whom living precariously in aging rental buildings.

We believe that the Quadra Village Community Centre has developed a great deal of experience in assisting individuals in these situations and is the right organization to provide this service. A housing outreach worker, employed through Quadra Village Community Centre and connected to the other Community Centres/Neighbourhood Associations will help increase the skillsets of staff and volunteers in those organizations. A housing outreach worker will offer the opportunity to provide individuals with the one-on-one support required to navigate individuals through current emergency housing programs, and support those individuals who do not qualify for existing programs - such as some single adults, couples without children, and some seniors. We believe that Quadra Village Community Centre is well situated to provide this critical service and the annual cost of service at $60,000 is a worthwhile investment.

Thank you for your consideration.

Sarah Murray
Executive Director
North Park Neighbourhood Association

t. [redacted] e. [redacted]

Fernwood NRG

May 14, 2021

To: Mayor and Council, City of Victoria

Re: Critical Need for Housing Outreach Support Worker

Dear Mayor Helps and Councillors:

Fernwood Neighbourhood Resource Group has encountered a dramatic rise in the number of single people and couples at risk of or in the process of losing their housing. While trying to meet these increased demands (and with limited capacity) our organization has been overwhelmed and feel as though we are not meeting the needs of our clients.

We are writing in support of the proposed Housing Outreach Worker, employed through Quadra Village Community Centre. This position would be connected to the other Community Centres/Neighbourhood Associations and will build our collective capacity to support our communities in addressing this urgent challenge.

As you know, the current housing market, especially for affordable rentals, is a challenge. And it is particularly difficult for individuals if they are contending with barriers such as low literacy, limited support, social isolation, and anxiety and depression. Based on this experience there is an undeniable need to enhance resources and create a system for one-on-one support for clients. A specific position/person is needed who can be dedicated to attempting to find short- and long-term housing options, before folks end up living outside, in their vehicles, or couch surfing.

The proposed Housing Outreach Worker will provide an opportunity for tailored one-on-one support to folks who do not meet current emergency housing definitions but are at risk of losing access to shelter. These folks often slip through the cracks and struggle to find support. While engaging in this work in our own community we have developed a great deal of experience in assisting single adults and couples in these situations; however, a Housing Outreach Worker will help increase the skill sets of our staff as well as act as an important resource for other Community Centres/Neighbourhood Associations. Quadra Village Community Centre is well situated to provide this critical service at this critical moment and the annual cost of service at $60,000 is a worthwhile investment.

Thanks for your consideration and please see the key components below.

Chantille Viaud (she/her)
Executive Director
Fernwood Neighbourhood Resource Group

Housing Outreach Worker Overview

The Issues:

•Single adults and couples losing their housing with limited time, opportunity (affordable housing stock), resources.

•Limited affordable market housing stock, long waits for affordable housing and narrow definition of eligibility for emergency housing.

•People on the precipice of homelessness who lack the knowhow to navigate such a competitive housing market.

•Busy staff in Community Centres who have great relationships with folks in the community, but are busy with other mandates central to their roles.

The Solution:

•A QVCC practicum student gathers resources to help this new Housing Outreach Worker can hit the ground running.

•A housing outreach (worker, 1FTE) support pilot facilitated by QVCC with referrals from the other Community Centres and Neighbourhood Associations. It is basically trying to assist adults (single and couples) who are at risk of homelessness, couch surfing, newly homeless etc.

•Building and bridging the skills and confidence to get the process of finding housing started (and keep it going).

•Helping people navigate the housing system including locating low rent options and seeking long term solutions through waitlists.

•Raising awareness among Community Centre and Neighbourhood Association staff/volunteers in order to ensure that folks have easy access to information to provide housing access support at the neighbourhood level.

Burnside Gorge Community Association
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May 14, 2021

To: Mayor and Council, City of Victoria

Re: Critical Need for Housing Outreach Support Worker

Dear Mayor Helps and Councillors,

Burnside Gorge Community Association (BGCA) operates a Homeless Family Outreach Program (HFO) that works specifically with families, with children under 19 in their care, who are homeless or at risk of becoming homeless. BGCA's HFO team has encountered an overwhelming rise in the number of single people and couples without children reaching out for support to maintain their housing. This population also does not quality for services for those who are hard to house.

Quadra Village Community Centre (QVCC) is proposing a pilot Housing Outreach Program to work with adults, singles and couples without children, who are homeless or at risk of homelessness to help people navigate the housing system including locating low rent options and seeking long term solutions through waitlists. As well, it will offer the opportunity to provide tailored one to support to folks who don't meet current emergency housing definitions but are in peril of losing access to shelter. QVCC also has the additional support of a practicum student to gather resources.

As you know, Victoria's housing market is extremely difficult. There is limited affordable market housing stock, long waits for affordable housing and a narrow definition of eligibility for emergency housing. It is highly competitive, particularly for those contending with additional challenges like low literacy, limited support, social isolation and moderate anxiety and depression. There is an intense need for additional resources and one-to-one support to find short- and long-term housing options to prevent people from resorting to precarious situations such as living outdoors or in vehicles.

We believe that Quadra Village Community Centre is well situated to provide this service and meet a critical need in our community. The annual cost of service at $60,000 is a worthwhile investment.

Sincerely,

Suzanne L. Cole

Suzanne Cole
Executive Director

Council Member Motion
For the Committee of the Whole Meeting of May 20, 2021

Date: May 20, 2021

From: Councillor Sharmarke Dubow and Mayor Helps

Subject: Establishment of City of Victoria International Decade of People of African Descent (IDPAD) Advisory Committee

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Background

On July 23, 2020, Council approved the following Council Member Motion dated July 16, 2020 from Councillor Dubow and Mayor Helps regarding the International Decade for People of African Descent as follows:

That the City of Victoria joins the government of Canada, the province of Ontario, the cities of Toronto and Ottawa, in acknowledging the International Decade for People of African Descent for the purpose of promoting respect, protection and fulfilment of all human rights and fundamental freedoms of people of African descent, as recognized in the Universal Declaration on Human Rights.

That Council directs staff to report back at the Period 2 2020 Update on the resource implications of reporting back as part of the 2021 budget on how to implement the International Decade of People of African Descent from 2021- 2024 including:

i) Raising awareness in the general public about the heritage and culture of people of African descent and around the International Decade of People of African Descent's broader goals and actions in Victoria.

ii) Delivering anti-racism including anti-black racism training to prevent systematic racism in city policy, bylaws, programs and services.

iii) Creating an advisory committee of people of African descent to work with and advise staff between 2021-2024 on the implementation of the International Decade for People of African Descent and commitment to People of African descent.

iv) Developing a capacity building grant program for Black-led organizations, black business owners, and institutions supporting and working with people of African descent.

v) Tracking and demonstrating progress with respect to City hiring practices at all levels to reflect the diversity of the community.

vi) *Creating internship opportunities for people of African descent to diversify the city's workforce.*

Other relevant motions are attached as Appendix A.

Through the 2021 financial planning process, Council funded up to $25,000 from the Council strategic grant funding to support leadership opportunities for children and youth of African descent with the grant program to be developed in consultation with the IDPAD advisory committee once it has been formed. Council also funded $75,000 from corporate consulting for the International decade for people of African Descent. A portion of this funding will be used to provide honoraria to committee members at a living wage.

The importance of advancing this initiative and putting out a call for Committee members is in alignment with the Provincial Government proclamation of May 23-29 as Anti-Racism Awareness Week. This proclamation coincides with the anniversary of the death of George Floyd and the subsequent rise of the Black Lives Matter movement on May 25th.

Approval of these Terms of Reference is required so that this important and timely work may begin, and that the City start to promote the future recruitment for this committee during Anti-Racism Awareness Week, May 23-29, 2021.

Recommendation:

That Council:

1. Adopt the attached Terms of the Reference for the City of Victoria International Decade of People of African Descent (IDPAD) Advisory Committee.

2. Direct staff to engage the communities identified in the Terms of Reference, inviting nominees for Council's consideration for appointment to the Advisory Committee by July 31, 2021.

Respectfully submitted,

Councillor Dubow

Mayor Helps

Attachments:

1. Terms of Reference – IDPAD
2. Timeline - IDPAD motions and fund approved

PROPOSED ADVISORY COMMITTEE TERMS OF REFERENCE

INTERNATIONAL DECADE OF PEOPLE OF AFRICAN DECENT

PURPOSE

The City of Victoria, has acknowledged and recognized the International Decade of People of African Decent 2015-2024 for the purpose of promoting respect, protection and fulfillment of all human rights and fundamental freedoms of people of African descent, as recognized in the Universal Declaration on Human Rights. In order to advance this commitment, the City of Victoria is establishing a new advisory committee to support the three themes of the Decade as follows:

Recognition: Support efforts to recognize and celebrate the contributions of Black Victorians as part of the City's contributions to mark the decade.

Justice: Support efforts to promote equitable outcomes for Black Victorians on issues relating to policing. Designing, implementing and enforcing effective measures to eliminate the phenomenon popularly known as “racial profiling” and eliminating institutionalized stereotypes concerning people of African descent.

Development: Support efforts for positive outcomes for Black Victorians in areas of housing, employment and entrepreneurship.

ROLE OF THE COMMITTEE

The role of the IDPAD Advisory Committee is to provide Council with recommendations on the following:

i) The recommended approach to implementing the IDPAD proclamation within the City of Victoria and community at large, including the development of a 3-year action plan;
ii) Receive and communicate out City activities and updates related to the IDPAD implementation to “parent” organizations the member represents, where applicable;
iii) Best practices to raise awareness in the general public about the heritage and culture of people of African descent and around the IDPAD broader goals and actions;
iv) Advise Council on emerging issues and trends of significance to Black communities as they relate to City services and programs through semi-annual reports;
v) How to ensure the interests and needs of Black communities are reflected in City programs and service delivery.

The committee is also expected to engage people of African descent and other community members through a series of at least three (3) public workshops and one (1) town hall meeting, to include the ideas of the broader community of the work of the IDPAD Committee and the City of Victoria’s work in implementing the IDPAD proclamation.

COMPOSITION AND APPOINTMENT

The Committee will be composed of nine (9) members of African descent and (where possible):

- Three (3) elder members, who self-identify and represent the wisdom of Black communities
- Three (3) youth members between the ages of 18 to 29
- Three (3) members that represent Black lead organizations and Business
- Have knowledge or previous experience in racial equity and/or anti-discrimination work or a strong commitment to learn and contribute to this work
- Assume an allyship role in removing systemic barriers racialized and marginalized communities and the African diaspora encounter
- Collectively reflect a range of interests of the Black community in fields such as, but not limited to:
    - Arts/media/sports representation/Black Identity
    - Access to justice & community safety
    - Education
    - Inclusion & Immigration
    - Black ownership/wealth
    - Access to affordable housing and shelter
    - Mental/Physical health
    - Democratic engagement

The IDPAD Committee will select a Chair and Vice-chair to coordinate the procedural and operational aspects of the Committee work.

Two (2) Members of City Council will be appointed to serve as non-voting members to the Committee. Council liaisons will communicate matters from Council on issues that the Committee is discussing and will speak on behalf of the motions passed by the Committee that come forward to Council.

TIMELINE/ TERM

The first meeting of the IDPAD Committee will be September 2021. The IDPAD Committee will be disbanded at the end of 2024 to coincide with the conclusion of the International Decade of People of African Descent.

MEETINGS AND DECISION-MAKING

The IDPAD Committee will meet every month or at a frequency as determined appropriate by the committee.

Committee members should expect a minimum time commitment of approximately 6 hours per month for the first six months, including meeting time.

Meetings will aim to balance transparency with creating a safe and trusting environment.

COMPENSATION

Committee Members will receive an honorarium for their participation set at the rate equivalent to the Living Wage in Victoria.

Any remuneration paid under these Terms of Reference shall be done in accordance with the applicable Canada Revenue Agency reporting regulations.

COMMUNICATIONS AND REPORTING

The IDPAD committee will provide semi-annual updates to City Council with a list of recommendations, activities and accomplishments resulting from the implementation of the IDPAD proclamation.

Additional recommendations of the IDPAD Committee outside this semi-annual reporting process that are adopted through committee motions will be forwarded to Council by staff through the Triannual Accountability Reporting Process. If the motion is of an urgent nature, the appointed Council liaisons may bring committee motions to Council on a case-by-case basis.

If an individual member of the Committee wishes to communicate to Council, City staff or the public, they shall be expected to provide a disclaimer stating that “the opinions reflected by the member are their own personal comments and are not endorsed or representative of the IDPAD Advisory Committee”.

July 23, 2020

Therefore, be it resolved as follows:
1. That the City of Victoria joins the government of Canada, the province of Ontario, the cities of Toronto and Ottawa, in acknowledging the International Decade for People of African Descent for the purpose of promoting respect, protection and fulfillment of all human rights and fundamental freedoms of people of African descent, as recognized in the Universal Declaration on Human Rights.
That Council directs staff to report back at the Period 2 2020 Update on the resource implications of reporting back as part of the 2021 budget on how to implement the International Decade of People of African Descent from 2021-2024 including:
2. i) Raising awareness in the general public about the heritage and culture of people of African descent and around the International Decade of People of African Descent's broader goals and actions in Victoria.
ii) Delivering anti-racism including anti-black racism training to prevent systematic racism in city policy, bylaws, programs and services.
3. Creating an advisory committee of people of African descent to work with and advise staff between 2021-2024 on the implementation of the International Decade for People of African Descent and commitment to People of African descent.
4. Developing a capacity building grant program for Black-led organizations, black business owners, and institutions supporting and working with people of African descent.
5. Tracking and demonstrating progress with respect to City hiring practices at all levels to reflect the diversity of the community.
6. Creating internship opportunities for people of African descent to diversify the city's workforce.

October 15, 2020

That Council:
A. Recognize the experiences of Black communities by fulfilling the calls of the International Decade of People of African Descent (IDPAD); and
B. Form an International Decade People African Descent Advisory Committee by the first quarter of 2021 and that:
a. The advisory committee membership be compensated for their participation; and
b. The advisory committee be asked to report to the City Council by May 2021 on an action plan for the City to address anti-Black racism and
c. The action plan be informed by community consultation.
C. Approve the inclusion of $18k in the 2021 budget to hire a consultant to develop and implement anti-black anti-racism training for all City staff, beginning with Council and senior management, and that the City Manager provide an update by Q4 of 2021 on the status and outcomes of this training including a breakdown of who received the training by department.

D. Approve $ 25k to be included in the 2021 budget to support Black children and youth leadership opportunities by providing grant funding to Black-led organizations, with the grant program to be co-designed by the IDPAD advisory committee.
E. Include $10,000 in the 2021 budget to engage a consultant to provide the capacity and expertise to establish and track workforce metrics in order to remove barriers to employment for underrepresented groups.
F. Include $7000 in the 2021 budget to engage a consultant with the expertise required to develop an internship program.
G. And that Council include address systemic racism and fulfill the calls of the International Decade of People of African Descent (IDPAD) as an action item in the Strategic Plan as a 2021 action item.

That Council:
1. Receive this report for information.
2. That Council forward the information contained in Attachment K and this motion to the 2021 Financial Planning process.
3. Staff provide draft terms of reference by November 23 of 2020 for the International Decade People African Descent Advisory Committee.

December 03, 2020

Direct staff to report back on the implications and suggested sources for funding of up to $70,000 for the International Decade for People of African Descent. And direct staff to report back in January 2021 on potential grant programs to carry out this work.

January 21, 2021

That Council fund up to $25,000 from the Council strategic grant funding to support leadership opportunities for children and youth of African descent and the grant program to be developed in consultation with the IDPAD advisory committee once it has been formed and fund $75,000 from corporate consulting for the International decade for people of African Descent.