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The Honourable Ravi Kahlon
Minister of Jobs, Economic Recovery and Innovation
Ministry of Jobs, Economic Recovery and Innovation
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Victoria BC V8W 9T2
VIA EMAIL: Economic.Plan.Engagement@gov.bc.ca

Dear Minister Kahlon: *Ravi*

B.C. Economic Plan: Regional Economic Prosperity Service Recommendations

On behalf of Metro Vancouver's Regional Economic Prosperity Service (REPS), I want to commend you and your team for setting a path to guide the development of the Province's economy through a new long-term Provincial Economic Plan based on the principles of economic growth and innovation, environmental sustainability, and equity and inclusion.

Please accept this letter as REPS's formal recommendations for your consideration. This input represents the views of staff and has not been reviewed or endorsed by the Metro Vancouver Board of Directors.

As you are aware, the ongoing economic transition to a digital economy presents many opportunities for British Columbians, but also risks much of the population being left further behind. As the provincial government seeks to develop an economic development plan that will grow innovation in the economy, careful policies will need to be enacted to ensure that the Province's economic recovery advances equitable opportunity for all residents.

In this economic plan, it is critically important that B.C. acts on its economic strengths and focuses on areas where we have specialization. REPS staff are recommending that the provincial government invest in areas where it can have the most impact to ensure innovation and growth in the economy:

- Ensure data analytics and predictive analytics are being used to understand the Province's economy and industrial trends and drive long-term strategic decision-making;
- Provide early-stage research investment to industries in which B.C. has productive advantages and coordinate efforts to improve technology transfer;
- Invest in industry-critical physical spaces to lease below-market, such as wet labs, incubation spaces, co-design facilities, and shared commercial spaces;
- Launch a *Centre of B.C. Labour Market Competitiveness* to align the Province's education and talent development system with the needs of the changing economy.

The attachment to this letter provides further details and recommendations for your consideration. Any questions related to this input can be directed to Megan Gerryts, Senior Policy Advisor, Regional Economic Prosperity Service by phone at 604-451-6640 or by email at Megan.Gerryts@metrovancover.org.

Thank you for your leadership in developing the B.C. Economic Plan. Working together, I believe we can create a more innovative, inclusive and sustainable economy for all residents of British Columbia.

Yours sincerely,



Sav Dhaliwal,
Chair, Metro Vancouver Board

SD/JWD/DF/mg

cc: Bobbi Plecas, Deputy Minister, Ministry of Jobs, Economic Recovery and Innovation
Tim Lesiuk, Assistant Deputy Minister, Cross Sector Initiatives and Secretariat, Ministry of Jobs, Economic Recovery and Innovation
James Harvey, Associate Deputy Minister, Investment and Innovation Division, Ministry of Jobs, Economic Recovery and Innovation
Ravi Parmar, Senior Ministerial Advisor, Ministry of Jobs, Economic Recovery and Innovation
Professor Mariana Mazzucato, PhD, Founding Director, University College London Institute for Innovation and Public Purpose

Encl: B.C. Economic Plan: Metro Vancouver Regional Economic Prosperity Service Recommendations
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B.C. Economic Plan: Metro Vancouver Regional Economic Prosperity Service Recommendations

The input and recommendations contained in this document are focused on where the provincial government can have the most impact to deliver on its triple-bottom-line goals in a rapidly changing economy.

High-Level Recommendations

- Ensure data analytics and predictive analytics are being used to understand the province's economy and industrial trends and drive long-term strategic decision-making
- Provide early-stage research investment in industries in which B.C. has productive advantages and coordinate efforts to improve technology transfer
- Invest in industry-critical physical spaces to lease below-market, such as wet labs, incubation spaces, co-design facilities, and shared commercial spaces
- Launch a *Centre of B.C. Labour Market Competitiveness* to align the province's education and talent development system with the needs of the changing economy

Global Trends: The Fast-Transitioning Economy

Digitization, automation, robotics, artificial intelligence, and improvements to information technologies enable faster and more efficient processes, but also have large implications on the nature of work and allocation of labour.ⁱ

- Negative impacts of the shift to a digital economy include underemployment, precarious work and the gig economy and a growing labour market reliance on low-wage service-sector positions.
- This transition affects the most vulnerable in our society. A recent study by RBC found that nearly two-thirds of jobs held by Indigenous workers are at risk of a skills overhaul as technological change will transform sectors that many Indigenous communities depend on, such as the skilled trades.ⁱⁱ

More information on this transition and how we can seize the opportunities presented by this shift can be found in the Technical Paper [“Preparing Metro Vancouver for the Digital Economy”](#).

Opportunities for Innovation and Growth

Through initiatives targeted at increasing commercial viability of applied and translational research, creating higher market penetration rates through public-private-partnership development strategies, and more efficiently transferring technology and accelerating commercialization, B.C. can be a leader in generating solutions for the world's greatest global challenges. Specifically, REPS staff recommend:

1. **Target investments to drive basic, applied, and translational research, and demonstrate proof-of-concept funding** to bridge the gap between applied research and the commercial viability of B.C.-developed intangible assets.
 - All public sector investment should be targeted to industries where the province has existing or emerging productive advantages (e.g., labour market pooling, supplier specializations,

- R&D expertise, etc.) to increase downstream benefits such as firms more likely to stay, hire and reinvest here.
- In the Metro Vancouver region, target industries include life sciences, tech and the green economy.
2. **Develop public-private-partnership research and development models and strategiesⁱⁱⁱ**
 - Modelling the successful example of Taiwan's Industrial Technology Research Institute^{iv}, this model allows the Province to oversee the applied / translational research funding, while the private sector oversees development to ensure commercial viability and the streamlined transfer of technology into the hands of industry.
 - Private sector investment in the development side effectively de-risks the strategy by helping to ensure a 'market-based' focus, versus a 'technology-based' one^v.
 3. **Create a centralized government-led research consortia and technology transfer centre**
 - 50 percent of the technologies we need to meet 2050 emissions reductions targets are currently undeveloped or at the demonstration or prototype phase.^{vi}
 - A coordinated effort is needed to accelerate technology transfer across the province to bring efficiency, economies, resource leveragability, and scale to the transfer of technology and commercialization of intellectual property out of B.C.'s research universities and institutes.

Addressing Barriers to Innovation and Growth

Building on StrongerBC and CleanBC, policy initiatives from the Province, when deployed strategically, can help address barriers to innovation and growth, inform decision-making at all levels, and help firms scale.

1. **Ensure data analytics and predictive analytics are being used to understand the province's economy and industrial trends and drive long-term strategic decision-making**
 - Traditional data sources based on the North American Industrial Classification System, do not necessarily reflect the rapidly changing digital economy, and when they do, are not necessarily released at a sufficiently fine-grained level
 - Most importantly, the province needs to shift from reporting (using data to describe what has happened) to anticipating, based on firm-level trends, input (e.g., capital, labour) in-flows and out-flows, and industrial network interactions, using data and predictive analytics
2. **Invest in industry-critical physical spaces to lease below-market, such as wet labs, incubation spaces, co-design facilities, and shared commercial spaces**
 - Physical spaces are a necessary factor of production for innovation and knowledge spillovers to occur. Unfortunately, in the Metro Vancouver region these spaces are often cost-prohibitive for small- and medium-sized enterprises
 - To assist with commercialization and market penetration, the InBC fund could be utilized to invest in building jobs supporting physical spaces and leasing them at below-market rates, this would produce longer term benefits helping many cohorts of start-up and development-stage firms

3. Launch a *Centre of B.C. Labour Market Competitiveness* to advise and reconfigure the province's education and talent development system with the needs of the changing economy

- A coordinated effort is needed to create the structural changes necessary for the B.C. labour market to compete in the rapidly-evolving global economy
- Through a *Centre of B.C. Labour Market Competitiveness*, the education and talent development system can be reconfigured to be:
 - Adaptive and responsive to industry and labour market needs in real-time, with industry representatives included in the development of stackable industry-recognized certificates, short-term talent development programs, and longer-term curricula to train people for occupations at low-risk of automation and in high demand by the industries of tomorrow
 - Demand-driven and linked between all talent development systems and institutions to provide education and talent development pathways and quick “pain point” identification to ensure training and educational advancement
 - “Future-proof” in preparing job seekers, incumbent workers, students, and dislocated workers for jobs that are at low-risk of redundancy and in high-demand by the industries that represent the drivers of tomorrow’s economy
 - Equity-centred, focused on removing barriers to education for equity-denied groups and Indigenous communities, and developing comprehensive skills transfer programs for newly-arrived immigrants with professional licences in their former countries

Supporting equity and Indigenous participation in the economy

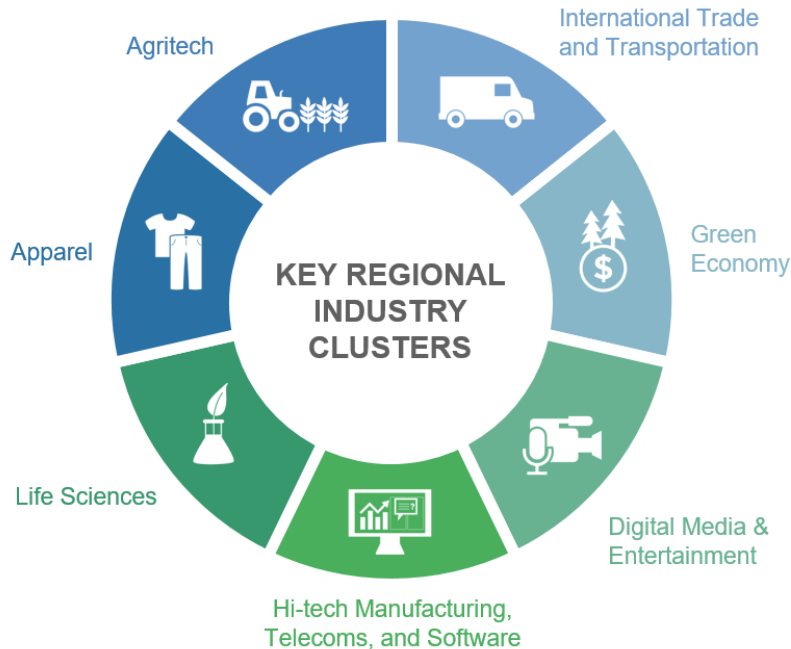
All actions taken to support equity and Indigenous participation in the economy must be informed by meaningful engagement with Indigenous communities and equity-denied groups early and throughout the process. Staff support actions in the following areas, for the Province to explore with targeted groups:

1. **Improve capital access channels, bring together more capital formation mechanisms, and link business advisory services** to connect Indigenous entrepreneurs with capital
2. **Address the digital divide by providing additional investments in technology and courses in the K-12 system**, focusing on Indigenous communities and equity-denied groups
3. **Co-locate and target education and talent development programs** for Indigenous communities and equity-denied groups for occupations at low-risk of automation and in high demand by the industries of tomorrow

All work should be undertaken in the context of the actions identified in the *Declaration on the Rights of Indigenous Peoples Act: Action Plan* that intends to create province-wide, systems based changes.

Industry Clusters in the Metro Vancouver Region:

Economic development efforts, particularly around innovation, should focus on industry clusters in which the province has productive advantages. Regional Economic Prosperity staff have identified the following seven key regional industry clusters to focus its efforts:



These industry clusters were chosen using the following selection criteria:

- Growing: expanding industries generate more opportunities, making it easier to add rather than replace firms
- Export-oriented: the selected industries must grow the regional economy by addressing global markets
- Competitive advantages: global markets can be served from anywhere, so there should be some combination of factors that make the Metro Vancouver region a particularly attractive location for the industry
- Quality jobs: the selected industries should create high-quality jobs
- Move the needle: REPS seeks to increase the chances of an industry thriving in Metro Vancouver
- Timely: REPS industry selection is also influenced by timeliness, both in the sense of favorable global economic trends, and serendipity

Quotes:

“Economic development is not a sprint, and our economic development goals will not be achieved through a single transaction or even through a series of transactions. Instead, economic development gains are achieved through highly thoughtful and analytically-demonstrated systems-based, structural changes.” – David Flaks, President, Regional Economic Prosperity Service, Metro Vancouver

“As the province looks for solutions to address major environmental, health or social challenges, such as climate change, cyberwarfare or the next health pandemic, there must similarly be – in addition to laws and regulations -- long-term economic development strategies, as well as cross-jurisdictional and inter-ministry collaboration on the intersection between those laws and strategies, to ensure that we are not going to be just a profligate *consumer* of the products, processes, services, and solutions that drive these solutions, but also a world-leading researcher, engineer, manufacturer, and exporter of them.” – *David Flaks, President, Regional Economic Prosperity Service, Metro Vancouver*

“Bottom line: long-term economic development strategies should focus on building anchored headquarters, sustainable export industries, and IP-generation that brings royalties back into the province to be recycled into more communities and to lift more residents.” – *David Flaks, President, Regional Economic Prosperity Service, Metro Vancouver*

ⁱ McKinsey Global Institute and Bain & Company predict that somewhere between 20 and 25 percent of all workers risk some form of dislocation due to automation and other capital-labour substituting technologies and modalities by 2030.” (Sources: James Manyika, Susan Lund, Michael Chui, Jacques Bughin, Johnathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi, McKinsey Global Institute, “Jobs lost, jobs gained: What the future of work will mean for jobs, skills and wages” (November 28, 2017); Karen Harris, Austin Kimson and Andrew Schwedel, “Demographics, Automation and Inequality” (February 7, 2018).)

ⁱⁱ [RBC, Building Bandwidth: Preparing Indigenous youth for a digital future](#)

ⁱⁱⁱ See, e.g., Breznitz, “Innovation in Real Places”, at pages 77-9, 105.

^{iv} [Taiwan Industrial Technology Research Institute](#)

^v Breznitz, “Innovation in Real Places”, at pages 60-65 (Public investment in Canada in R&D represents 0.8 percent of GDP; one of the highest amongst OECD (Organization of Economic Cooperation and Development) nations. Unfortunately, however, the more taxpayer money that the government has invested to spur private-sector innovation, the less Canadian firms have co-invested to do so, discharging private firms from their all-important innovation-agency role; indeed, private sector R&D expenditures have been continuously dropping across Canada, now representing less than 1.0 percent of GDP, which is one of the lowest levels amongst OECD nations, and along with this drop, patents per capita and labour productivity have also fallen.)

^{vi} [“Net Zero by 2050” International Energy Agency \(2021\)](#)