



**BC TECH**  
association

A New Economic Narrative for

# British Columbia

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# Table of Contents

<b>Executive summary</b>	<b>3</b>
<b>Welcome to the 21<sup>st</sup> century</b>	<b>4</b>
<b>Understanding B.C.'s economy today</b>	<b>5</b>
<b>GDP</b>	<b>6</b>
Where we are today	6
Trends	6
<b>Employment</b>	<b>7</b>
Where we are today	7
Salaries	8
Trends	8
B.C. Labour Market Outlook	9
<b>Exports</b>	<b>10</b>
Where we are today	10
Trends	10
<b>An evolving global economy</b>	<b>11</b>
<b>Trends and headwinds</b>	<b>11</b>
<b>A changing global landscape</b>	<b>12</b>
Global economic response 1: Embracing the rise of intangibles and the knowledge-based economy	12
Global economic response 2: Harnessing technology and innovation as the primary growth engine	13
Global economic response 3: Increasing investment in people and the infrastructure of the services economy	13
Global economic response 4: Redefining economic competitiveness	14
<b>A new narrative for a 21<sup>st</sup> century B.C. economy</b>	<b>15</b>
<b>Setting new priorities</b>	<b>15</b>
Priority 1: Capture better data on B.C.'s economy, to identify the economic drivers that drive long-term prosperity and competitiveness in the knowledge economy	16
Priority 2: Embrace technology and innovation as the critical driver of economic growth and resilience with increased investment in tech talent and support for entrepreneurs to scaleup	16
Priority 3: Increase access to education and skills training and invest in the infrastructure of the services economy	17
<b>Bringing it all together</b>	<b>18</b>
<b>Bibliography</b>	<b>19</b>

## B.C.'s economy isn't what WE TELL OURSELVES IT IS.

Over the past three decades a massive shift has occurred as we've rapidly become a knowledge and service-driven economy. And yet our economic-narrative remains grounded in the 20th century idea of B.C. as primarily an exporter of natural resources. We need to make a shift in how we think in the 21<sup>st</sup> century.

This report reviews 3 key elements of B.C.'s economy today, to see the full picture shown by the data, and discovers it is quite different than the prevailing narrative:

### 1. GDP

Services represents 75% of B.C.'s GDP and it is B.C.'s services sectors that are driving a majority of the economic growth

### 2. Employment

Services represent 80% of B.C.'s jobs and are the sectors projected to add the most jobs, many that are well paying jobs and will require at least some post-secondary education

### 3. Exports

Services are 50% of B.C.'s exports

This report identifies 4 clear economic responses that jurisdictions are adopting to address global trends and headwinds:

### 1. Embracing the rise of intangible assets and the knowledge-based economy

Everything from service industries, to computer software, patented technology and data. Investment in intangibles is increasingly the primary asset fueling OECD economies, and the primary source of economic competitiveness and long-term prosperity.

### 2. Harnessing technology and innovation as the primary economic growth engine

As the intangible and knowledge-based economy takes a larger share of economic activity, few elements are more important than technology and innovation. In a modern economy, innovation is one of the keys to competitiveness, economic growth, and the creation of good, sustainable jobs.

### 3. Increasing investment in people and the infrastructure of the services economy

Labour isn't a cost, it is the primary source of economic value. The future depends on the ability to educate, train and reskill talent, to attract newcomers and to realize the full potential of people by investing in the infrastructure of the services economy.

### 4. Redefining economic competitiveness

A competitive jurisdiction must be responsive to the headwinds and trends of the global economy, determining when to mitigate, when to adapt and when a fundamental rethink is in order. To remain competitive, an economy needs to acknowledge the role that intangibles already play and re-think assumptions about taxation, IP, competition and FDI.

This report recommends 3 priority areas to guide B.C.'s thinking on the economy:

### Priority 1

Capture better data on B.C.'s economy, to identify the economic drivers that drive long-term prosperity and competitiveness in the knowledge economy

We must reassess where our strengths and weaknesses lie, and which sectors are most poised to compete and become the new engines for long term, sustainable growth. This will require efforts to better track and report on digital and intangible-based economic growth and policies that reinforce business investment in R+D. Perhaps most fundamentally, it requires setting a clear and consistent vision for economic growth.

### Priority 2

Embrace technology and innovation as the critical driver of economic growth and resilience with increased investment in tech talent and support for entrepreneurs to scaleup

Innovation and the associated application of new techniques and technologies offers nearly every sector of our economy an opportunity to increase productivity, increasing both revenue and exports. To seize this growth, we must prioritize the economic activity that will emphasize innovation and technology's overall share of provincial GDP.

### Priority 3

Increase access to education and skills training and invest in the infrastructure of the services economy

More than ever before B.C.'s economic future relies on its people – its ability to educate, train and re-train and hold onto the workers in our workforce. This offers new opportunities for growth, and a reconsideration of who benefits within an economy and how can we share prosperity more effectively.

# Welcome to THE 21<sup>ST</sup> CENTURY

**British Columbia is a small, open economy that is coming to a critical inflection point. The world that we have operated within for the past three decades has been undergoing a rapid and fundamental shift, forcing us to reconsider how we will advance the prosperity of current and future generations of British Columbians.**

Globally there has been a long-term shift in what drives economic activity, growth, resilience and, ultimately, competitiveness. In the 20<sup>th</sup> century huge importance was placed on global supply chains, deficits, debt, interest rates, taxation and foreign direct investment, especially in physical assets.

The 21<sup>st</sup> century is quite different. Thinking is changing about what makes an effective and resilient supply chain and what the infrastructure requirements are for a services economy. There is a new wave of intangible assets, such as data, intellectual property and design that are changing the way economies grow.<sup>1</sup> There are many names for an economy driven by these new factors: data-driven, innovation, knowledge, emerging economy or increasingly, the intangible economy.<sup>2</sup>

So the question we must ask ourselves today is: how can we ensure the B.C. economy moves beyond the thinking of the 20<sup>th</sup> century to be competitive in the 21<sup>st</sup>?

With the changes in geopolitics, climate change, the rising importance of intangibles and B.C.'s demographics we need to challenge some of the core assumptions we are making about what makes an economy strong, and what our focus needs to be going forward.

It begins by being honest about where we are today.

British Columbia has benefited greatly from circumstances. The abundant natural resources in our province, an attractive geographic setting and favourable access to North American and Pacific Rim markets have conferred a significant advantage that we have exploited to the benefit of many British Columbians.<sup>3</sup>

However, these same advantages have led us to rest on our laurels – to celebrate a high quality of life and strongly performing economy, while neglecting the factors driving future growth and long-term sustainability.

We need to make a shift in how we think about our economy—where growth comes from and what matters most going forward. We need to set new priorities and tell a new story about where our future lies. This must include opportunities for Indigenous Peoples to fully participate in, lead and benefit from the B.C. economy.

Circumstances change; Covid has taught us that if nothing else, B.C.'s future prosperity depends on mastering the factors that are within our control, not hoping for favourable circumstances. As they say, hope is not a strategy.

This report takes a look back at some of the core economic trends that have taken place and offers a new read on where growth has actually been occurring and what our economy really is today.

It examines the forces that are reshaping economies around the world, outlining the impacts on British Columbia and how other jurisdictions are choosing to respond.

Finally, it brings these together and offers a new narrative and new priorities for our province. The stories we tell about ourselves, and what we aspire to do are powerful and shape the political social and economic choices we make as a province.

# Understanding B.C.'S ECONOMY TODAY

**Any examination of B.C.'s future must start with a look at where we have come from. To properly analyze the trends and headwinds that are shaping the future of B.C.'s economy, we need to know where we stand today, and how things have changed over time.**

There are many different measures and metrics that are used to help assess the performance of an economy. Each has a different level of complexity and focus and none offer a complete picture on their own.

Below, we examine some of the most fundamental measurements that shape a picture of the B.C. economy. Importantly, we don't look at metrics that quantify distributional effects in our economy. There is no question that this is a critical lens that needs to be applied as we consider what our priorities should be going forward. But for this examination of our economy, we focus on the broader shape and location of economic activity.

## We focus on the following core components of our economy:

- GDP overall, and the contributions by different sectors
- Employment, both the distribution across industries, including wage differentials and the forecast for where jobs are likely to be created
- Exports of goods and services

Across all these metrics we are limited by both the public availability of data, the comprehensiveness of the data and the documented challenges in properly tracking economic activity in the digital age.<sup>4</sup>

This is particularly relevant given the use of the North American Industry Classification System (NAICS) in this report to look at the contributions of different sectors to the B.C. economy. There is ongoing work to develop more comprehensive frameworks for measuring the digitization of economic activity, including updates to the NAICS system.<sup>5</sup> The challenge with NAICS is that it was designed for industries in the 20<sup>th</sup> century, and doesn't allow easy attribution for economic activity in the technology and digital space. The government of Canada has started to address this—bringing forward a new measurement tool to track clean tech investments—but in general we are certainly missing the full impact tech is having on exports, GDP and our economy in general.<sup>6</sup> However its limitations notwithstanding, the NAICS system is the tool we have today to look at the contributions of different sectors.

Finally, we have chosen to focus on the trends leading up to and including 2019. Although some data for 2020 is available, the impacts of COVID 19 fundamentally disrupted economic activity.

For the economy COVID 19 was the great revealer. It revealed true weakness and unsustainability. It showed us the inequalities across different sectors, and across different constituencies within B.C. It revealed how little we know about what comprises the majority of B.C.'s economy. However, amidst these challenges we also found out more about our true strengths and where our potential for growth likely lies. The tech sector accelerated its pace of job creation throughout the pandemic, and as we emerge from the other side, and take stock of our economy, we see the use of technology in businesses is only expanding.

We focus below on the trends that preceded COVID 19 because the pandemic accelerated them—as seen, for instance, with the prevalence and importance of technology and technology companies in our economy.

<sup>1</sup>Public Policy Forum, New North Star, Canadian Competitiveness in an Intangibles Economy, April 2019. <https://ppforum.ca/wp-content/uploads/2019/04/PPF-NewNorthStar-EN4.pdf>

<sup>2</sup>B.C. Innovation Commissioner, Putting Innovation to Work for British Columbia: Growing B.C. Companies, January 2020. [https://www2.gov.bc.ca/assets/gov/government/final\\_ic\\_report\\_2020.pdf](https://www2.gov.bc.ca/assets/gov/government/final_ic_report_2020.pdf)

<sup>3</sup>ibid.

<sup>4</sup>Brookfield Institute, Just out of Reach: The Elusive Quest to Measure the Digital Economy, June 2021. [https://brookfieldinstitute.ca/wp-content/uploads/DigitalEcon\\_FINAL.pdf](https://brookfieldinstitute.ca/wp-content/uploads/DigitalEcon_FINAL.pdf)

<sup>5</sup>OECD, A Roadmap Toward a Common Framework for Measuring the Digital Economy, 2020. <https://www.oecd.org/sti/roadmap-toward-a-common-framework-for-measuring-the-digital-economy.pdf>

<sup>6</sup>Canada needs better economic data to inform 21st century decision-making. BC Business, July 2021. <https://www.bcbusiness.ca/Opinion-Canada-needs-better-economic-data-to-inform-21st-century-decision-making>

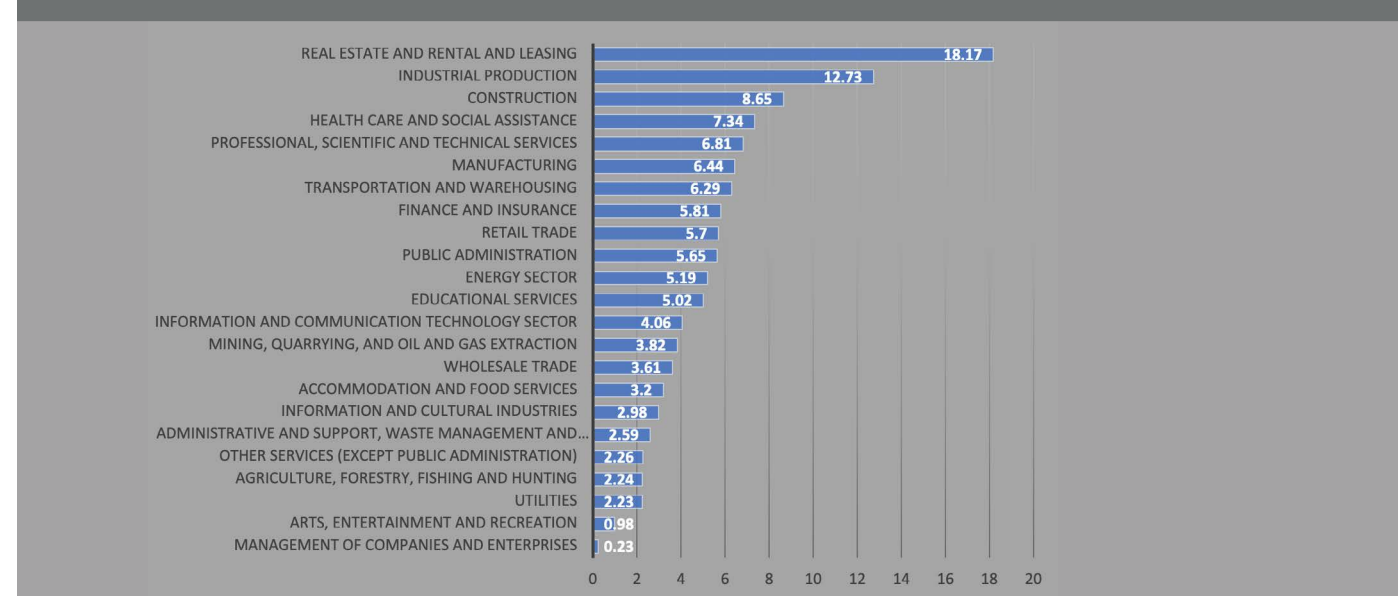
# Measuring B.C.'s economy: GDP

Gross domestic product (GDP) is the standard way to measure the value add created in an economy.

## Where we are today

Overall, B.C.'s Real GDP in 2019 was \$271.9 Billion having grown by 2.7%, compared to the national average of 1.9%.<sup>78</sup> We often think of the economy as tangible products and resources. However in 2019 over 76% of GDP came from service-producing sectors, with the remaining in goods-producing industries. The graph below shows us the percentage share that different NAICS industries contributed to provincial GDP in 2019.<sup>9</sup>

Gross domestic product (GDP) at basic prices, by industry, British Columbia, 2019 percentage share



## Trends

For the past 10 years industrial production has modestly declined over the period, and construction and housing have been increasing their share. As of 2020, Housing has climbed even higher than the graph above shows, now representing over 20% of provincial GDP, with Construction at nearly 10%.<sup>10</sup>

As noted above, the Tech sector is difficult to properly quantify as its activity is included in multiple categories. However, we can assume that tech sector growth explains in large part the growth in Professional, Scientific and Technical Services, which has grown from ~5.5% of GDP to almost 7% in the last 10 years.

<sup>78</sup>Government of B.C., Budget and Fiscal Plan 2021/22-2023/24, 2021.

<sup>8</sup>Statistics Canada, Provincial and Territorial economic accounts, 2019. 2019. <https://www150.statcan.gc.ca/n1/daily-quotidien/201109/dq201109b-eng.htm>

<sup>9</sup>Statistics Canada. Table 36-10-0400-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories, percentage share

<sup>10</sup>Ibid.

On the other side of things, Manufacturing has been shrinking from a high in 2001 where it contributed 11.3% of GDP. Agriculture, Fishing, Forestry and Hunting have declined and Mining, Quarrying and Oil and Gas are also down from the high they reached 15 years ago, now representing only ~4% of provincial GDP.

Finally, the other important trend is the share of provincial GDP between goods-producing and service-producing industries. Although the ratio has shifted modestly year-to-year, service-producing industries generally provided 75% of provincial GDP over the past 20 years, with a gradual overall increase occurring over the last 10.

# Measuring B.C.'s economy: EMPLOYMENT

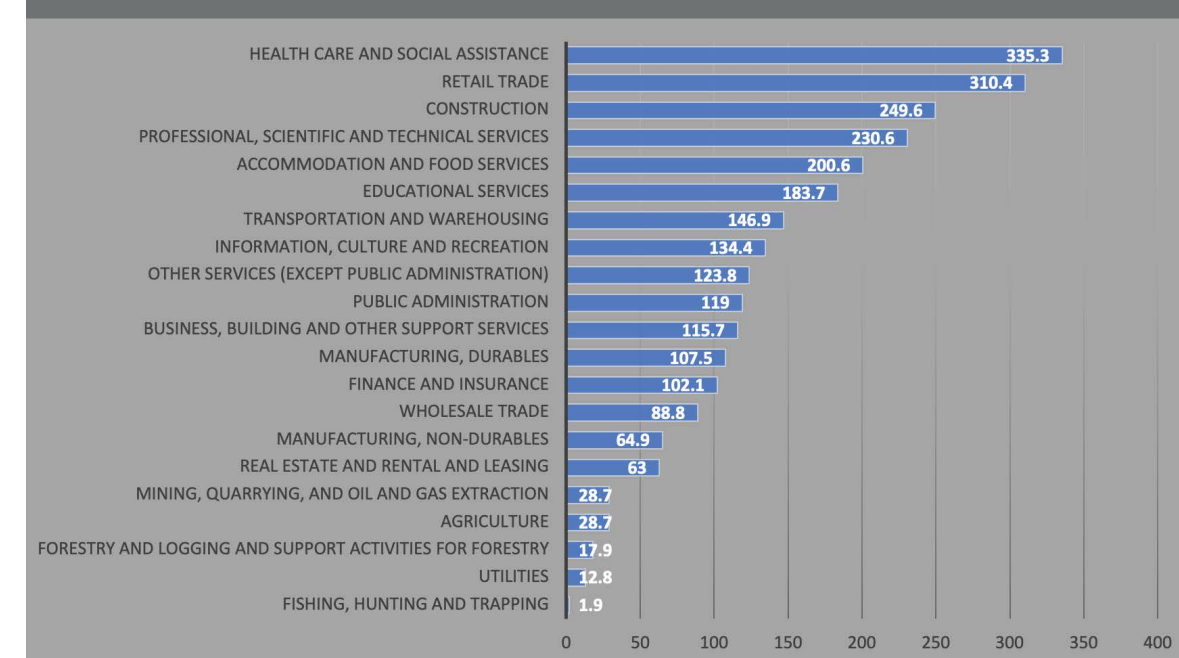
Another way to look at the B.C. economy is through the lens of employment. Unlike the trends in industry share of GDP, the changes in both the share of total employment, as well as the number of jobs across different industries have changed considerably over time.

## Where we are today

In 2019, B.C.'s economy had over 2.6 million jobs and an unemployment rate of 4.7%, with the vast majority of jobs (over 80%) being found in a service-producing sector.<sup>11</sup>

The figure below shows the distribution of jobs across the NAICS categories in B.C. in 2019.<sup>12</sup>

Employment by NAICS Category in BC, 2019



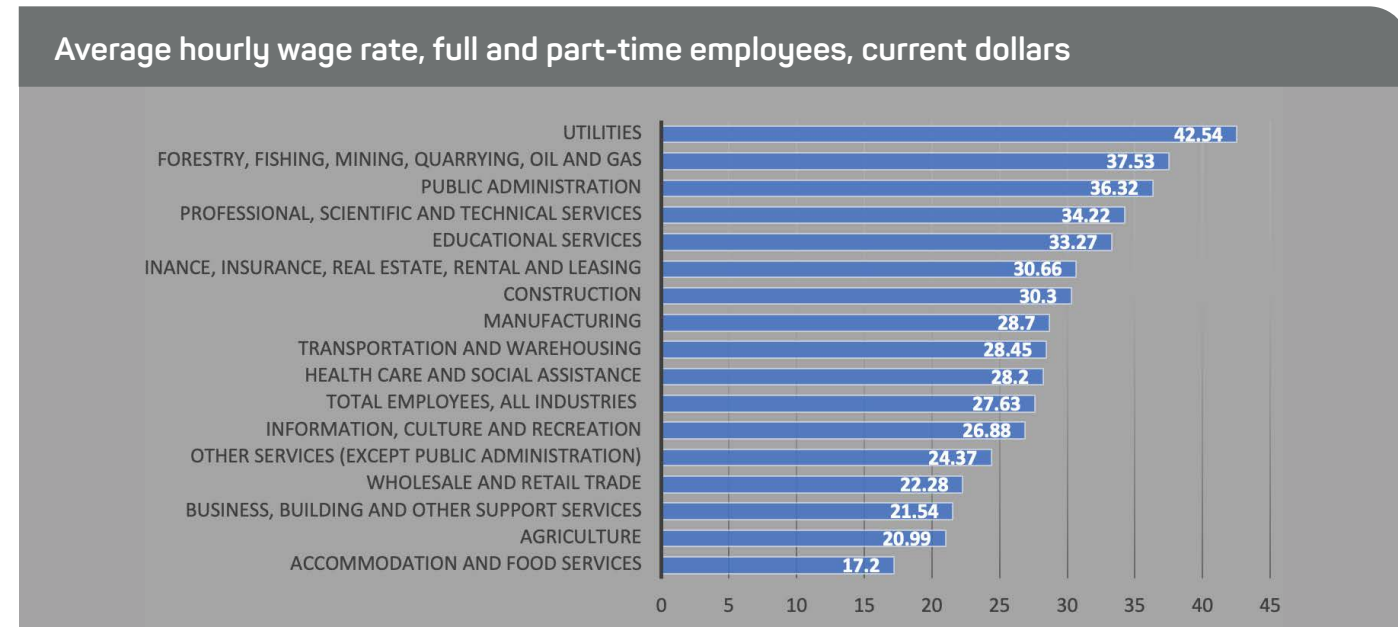
<sup>11</sup>Government of B.C., Budget and Fiscal Plan 2021/22-2023/24, 2021.

<sup>12</sup>Created from data available at: Statistics Canada. Table 14-10-0023-01 Labour force characteristics by industry, annual (x 1,000)

## Salaries

One thing to keep in mind when looking at overall employment is wage differences between sectors. Although Retail Trade was one of the highest employment sectors in 2019, it has one of the lowest employee wage averages.<sup>13</sup>

The graph below shows us the breakdown in wages for 2019:



## Trends

Over the past 20 years, service-producing sectors have consistently averaged nearly 80% of the jobs in the economy, with goods-producing sectors representing ~20%.

When we look at the share of overall employment over time, only Professional, technical and scientific services and Healthcare and social assistance have seen noteworthy long-term increases. Professional, technical and scientific services have grown from an average of ~7% over the past 20 years to ~9.3% as of 2019. Healthcare and social assistance have gone from an average of ~11.5% to over 13%. In the last several years, there has been a bump in Construction as well, representing nearly 9.5% of total employment in the last 3 years.<sup>14</sup>

The most noteworthy decreases in employment, both in absolute terms and as a share of total employment, have occurred in Forestry, logging and support activities for forestry, and in Durable Manufacturing. From a high of over 35,000 jobs in 2000, Forestry, has seen a long-term decline, averaging less than 20,000 jobs in the last few years. The drop has been similar in Durable Manufacturing, which averaged ~120,000 jobs a year between 2000-2009 and ~101,000 between 2010-2019. While it has created jobs in the previous few years, its share of overall employment has seen a long-term decline.

<sup>13</sup>Statistics Canada. Table 14-10-0064-01 Employee wages by industry, annual

<sup>14</sup>This and following calculations in the section are author calculations based on data from: Statistics Canada. Table 14-10-0023-01 Labour force characteristics by industry, annual (x 1,000)

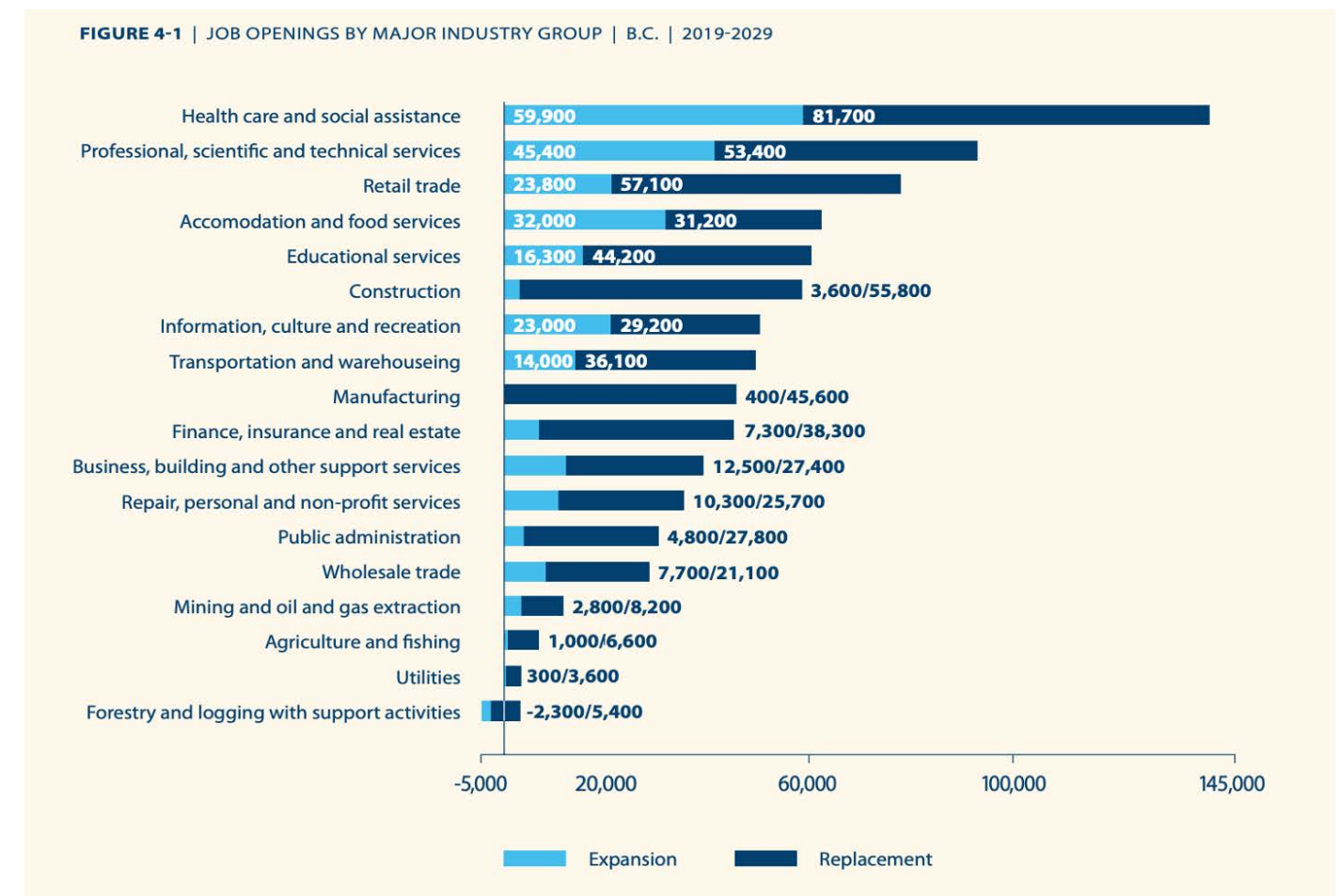
## B.C. Labour Market Outlook

When we look at the labour market going forward, B.C.'s government expects to see job growth of 861,000 over the 2019-2029 period.<sup>15</sup> This is based on expectations of 598,000 (69%) jobs that involve replacing someone leaving the workforce, and 263,000 (31%) new jobs created through economic growth.

There's reason to think that this may be underestimating the number of new jobs the economy will add. First, many jobs will also be changed significantly with some repetitive or dangerous tasks being automated and new higher value tasks being added, increasing the overall number of new jobs. Second, based on previous trends and consultations with tech sectors stakeholders, many more new jobs are anticipated than are forecast and many more of them will require technology skills.

We know for instance that the B.C. Government's 2019 estimates understated job growth in the tech sector. Over the 10 year forecast period to 2029, we expect B.C.'s tech sector will create 88,000 more jobs than were anticipated in the 2019 labour market outlook projection.<sup>16</sup>

The graphic below shows how the B.C. Government forecast in 2019 would be distributed across the different industry sectors by 2029<sup>17</sup>:



<sup>15</sup>Government of British Columbia, British Columbia Labour Market Outlook: 2019 Edition, 2019. [https://www.workbc.ca/getmedia/18214b5d-b338-4bbd-80bf-b04e48a11386/BC\\_Labour\\_Market\\_Outlook\\_2019.pdf.aspx](https://www.workbc.ca/getmedia/18214b5d-b338-4bbd-80bf-b04e48a11386/BC_Labour_Market_Outlook_2019.pdf.aspx)

<sup>16</sup>Survey of BC Tech members about expected job growth, May-June 2021.

<sup>17</sup>Graphic reproduced from: British Columbia Labour Market Outlook: 2019 Edition. [https://www.workbc.ca/getmedia/18214b5d-b338-4bbd-80bf-b04e48a11386/BC\\_Labour\\_Market\\_Outlook\\_2019.pdf.aspx](https://www.workbc.ca/getmedia/18214b5d-b338-4bbd-80bf-b04e48a11386/BC_Labour_Market_Outlook_2019.pdf.aspx)

**Looking at this, we can see that just five industries account for half of the total job openings projected over the next 10 years. This includes:**

- Professional, Scientific and Technical Services: 98,800 job openings according to B.C. Government estimates and 186,800 job openings once updated tech industry projections are reflected
- Health Care and Social Assistance: 141,700 job openings
- Retail Trade: 80,900 job openings
- Accommodation and Food Services: 63,200 job openings
- Educational Services: 60,400 job openings

There is another important trend in this data—almost 80% of the B.C. Government’s anticipated job openings over the next 10 years will require some form of post-secondary education or training.<sup>18</sup>

## Measuring B.C.’s Economy: EXPORTS

As a small open-market economy, and as Canada’s gateway to the Pacific, trade is a critical part of B.C.’s economy. This includes our exports of goods and services to international jurisdictions, as well as our exports to other provinces and territories within Canada.

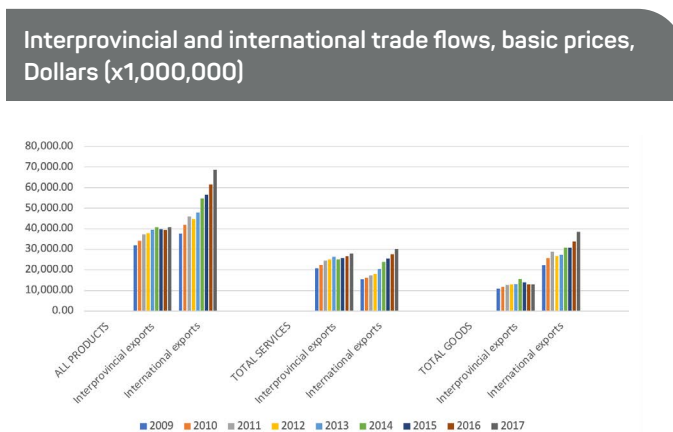
### Where we are today

Much of the historic focus has been on the goods we export. In recent years, there has been a growing interest and importance placed on service industries as they increasingly drive both new economic activity and job growth.

However, if you look at our provincial budgets prepared annually, little to no mention of service exports is made, and no tracking appears available on the BC Trade website. Our ability to track these flows over time is hindered by the limited data available from the B.C. Government and Statistics Canada.

### Trends

The graph to the right is the best picture that could be found that shows the contributions made through the export of goods and services in British Columbia.<sup>19</sup>



<sup>18</sup>Ibid  
<sup>19</sup>Created from data available at: Statistics Canada. Table 12-10-0088-01 Interprovincial and international trade flows, basic prices, summary level (x 1,000,000)

In 2017, the most recent year for which this data is available, we can see that Service exports represented nearly 44% of international exports and ~69% of interprovincial exports. Taken together, this represented over 53% of the value of overall exports that occurred in the year.

This has been the trend for at least the past 5 years—services have represented more than 50% of exports overall.

## An evolving GLOBAL ECONOMY

### Trends and Headwinds

Looking at how B.C.’s economy is performing today, and what the trends have been over the past twenty years can help us understand where we are starting from. But it only shows us some of what the future may hold. To get a more complete picture of the rapidly changing global economy we must look at the major forces affecting economies across the globe, and how different jurisdictions are responding.

Whether it’s technology, climate change, demographics or geopolitics, these forces are forcing a fundamental rethink about the elements that a successful economy must possess to remain competitive.<sup>20</sup> These forces can be broken into two effective categories: Economic Headwinds and Global Trends, as Alan Winter did in his 2020 Innovation Commissioner report:<sup>21</sup>

#### ECONOMIC HEADWINDS Mitigate & Adapt



*"Tack into the wind"*

- 🌐 Geopolitics
- 🤝 Trade uncertainty
- 📉 Debt leverage & recession conc
- 📊 Commodity prices
- 👤 Consumer spending
- 🏠 Construction & slowing real est

#### GLOBAL TRENDS Plan & Redesign



*"Ride the wave"*

- 👤 Demographics
- 🖥️ Technological disruption
- 📄 Changing nature of work
- 🏙️ Urbanization
- 🌐 Globalization
- 🌡️ Climate Change
- ♻️ Green Economy

For businesses, workers, communities and governments to find success going forward, we must seek to understand how these trends and headwinds will present new challenges and new opportunities and adapt accordingly. Assuming the B.C. economy will be immune from these forces – or isn’t already being changed by them—is a mistake. Attempting to preserve a status quo, or applying outdated economic assumptions to guide our path forward will only result in the costs of change increasing and opportunities to slip through our fingers.

<sup>20</sup>Public Policy Forum, New North Star, Canadian Competitiveness in an Intangibles Economy, April 2019. <https://ppforum.ca/wp-content/uploads/2019/04/PPF-NewNorthStar-EN4.pdf>  
<sup>21</sup>Graphic reproduced from: Innovation Commissioner, Putting Innovation to Work for British Columbia: Growing B.C. Companies, January 2020. [https://www2.gov.bc.ca/assets/gov/government/final\\_ic\\_report\\_2020.pdf](https://www2.gov.bc.ca/assets/gov/government/final_ic_report_2020.pdf)

## A changing global landscape

In the face of these trends and headwinds, jurisdictions around the world have been changing what they prioritize to drive economic growth and to develop competitive prosperous economies. The speed and depth of this shift differ greatly amongst different regions, but the evidence is piling up that traditional approaches to economics will be insufficient to navigate these new waters.<sup>22</sup>

While this conversation is underway in Canada, it's clear that we are falling behind. Canada and B.C. have not adapted to the extent necessary to these changes.<sup>23</sup> A number of new studies and reports have called for the development of new industrial policies to address

these new trends and headwinds, including the rise of intangibles, the new wave of economic nationalism and geopolitical competition and the impacts that climate change and the decarbonization of our economy will have.

For British Columbia to chart a deliberate path forward, it must develop a sophisticated understanding of these forces, how they are reshaping economies around the world, and how other jurisdictions are responding.

## Global economic response 1: Embracing the rise of intangibles and the knowledge-based economy

Few forces have more fundamentally changed the economy than the rise of intangible assets. Including everything from service industries, to computer software, patented technology and data, investment in intangibles is increasingly the primary asset fueling OECD economies, and the primary source of economic competitiveness and long-term prosperity.<sup>24,25</sup>

As we saw when we looked at the B.C. economy, services (an intangible good) and the service industry is already responsible for over 75% of our provincial GDP, and 80% of all jobs in the province.<sup>26</sup> In fact, out of 1.4 million jobs created in B.C. since 1976, 1.2 million were in the service sector, as well as 96% of all new jobs in the last decade.<sup>27</sup> The same trend has been taking place in developed nations across the world, as the growth in trade of services outpaces that of goods and merchandise.<sup>28</sup>

However, there is significant evidence that we may not be adequately valuing or supporting the knowledge-based economy in B.C. Studies that have looked at Canada overall have found that

we are falling behind our peers when it comes to both the speed and scale of our shift to support this critical area of our economy.<sup>29</sup> Further anecdotal evidence for this specifically in B.C. can be found in a review of the annual budget produced by the B.C. government. In looking through the provincial budgets for every year that Statistics Canada data was available on the “export of services” from B.C. internationally and inter-provincially, only two references could be found concerning “service exports”. These references were both in 2021 and cited the lack of data available. This is in contrast to countless pages containing both charts and analysis on the export of goods/merchandise, despite services representing a larger share of what we export.

This isn't simply a failure to report on available data—it's the challenge of having the data in the first place.<sup>30</sup> It will be important for us to prioritize the development of metrics that allow us to properly measure the impacts of the knowledge economy and intangible capital, particularly in light of the role it plays already in B.C.'s economy.

<sup>22</sup>Public Policy Forum, New North Star, Canadian Competitiveness in an Intangibles Economy, April 2019.

<sup>23</sup>Public Policy Forum, New North Star II, A Challenge-Driven Industrial Strategy for Canada, April 2020. <https://ppforum.ca/wp-content/uploads/2020/04/NewNorthStarII-PPF-APRIL2020-EN.pdf>

<sup>24</sup>Innovation, Science and Economic Development Canada, Building a Nation of Innovators, 2019. [https://www.ic.gc.ca/eic/site/062.nsf/eng/h\\_00105.html](https://www.ic.gc.ca/eic/site/062.nsf/eng/h_00105.html)

<sup>25</sup>OECD, Supporting Investment in Knowledge Capital, Growth and Innovation, October 2013. [https://read.oecd-ilibrary.org/industry-and-services/supporting-investment-in-knowledge-capital-growth-and-innovation\\_9789264193307-en#page1](https://read.oecd-ilibrary.org/industry-and-services/supporting-investment-in-knowledge-capital-growth-and-innovation_9789264193307-en#page1)

<sup>26</sup>Business Council of British Columbia, Opinion: Export of services plays a strong and growing role in B.C. economy, June 2020. <https://bcbc.com/insights-and-opinions/opinion-export-of-services-plays-a-strong-and-growing-role-in-b-c-economy>

<sup>27</sup>BC Innovation Commissioner, Putting Innovation to Work for British Columbia: Growing B.C. Companies, January 2020. [https://www2.gov.bc.ca/assets/gov/government/final\\_ic\\_report\\_2020.pdf](https://www2.gov.bc.ca/assets/gov/government/final_ic_report_2020.pdf)

<sup>28</sup>Economic Development Canada, The rising tide of service exports, January 2019. <https://www.edc.ca/en/blog/the-rising-tide-of-service-exports.html>

<sup>29</sup>Brookfield Institute, The Intangible Shift: Changing Gears to Compete in the New Economy, February 2020. <https://brookfieldinstitute.ca/wp-content/uploads/The-Intangible-Shift-ONLINE-1.pdf>

<sup>30</sup>Brookfield Institute, Just out of Reach: The Elusive Quest to Measure the Digital Economy, June 2021. [https://brookfieldinstitute.ca/wp-content/uploads/DigitalEcon\\_FINAL.pdf](https://brookfieldinstitute.ca/wp-content/uploads/DigitalEcon_FINAL.pdf)

## Global economic response 2: Harnessing technology and innovation as the primary economic growth engine

As the intangible and knowledge-based economy takes a larger share of economic activity, few elements will be more important than technology and innovation. In a modern economy, innovation is one of the keys to competitiveness, economic growth, and the creation of good, sustainable jobs.<sup>31</sup>

Innovation funding has not been one of Canada's strengths this century although since 2015 the federal government has been making a renewed focus on advancing R+D across the country. Canada faced unique challenges in making a shift away from the low-innovation business strategy that has dominated over the last 10 years, most notably the fact that our physical location next to the United States, a highly innovative and far larger economy, has allowed us to be a technology taker rather than a maker.<sup>32</sup>

B.C.'s government has not yet been persuaded to invest in programming in the way other provinces like Ontario, Quebec and more recently Alberta have done to ensure their home-grown tech

companies can realize their potential. The top 1% of B.C.'s tech companies have raised the ceiling for ambition, resulting in eight breakout ‘unicorn’ success stories in the first half of 2021.<sup>33</sup> These tremendous success stories demonstrate B.C. can build globally successful tech companies. The challenge for governments is to ensure that we are supporting the far larger number of small tech companies, and that everyone in the sector can hope to realize a positive and growing future.

In B.C. our technology sector—currently estimated at around 7% of GDP—has significant room to grow.<sup>34</sup> Doubling the sector's revenue, and thereby bringing its percentage of GDP generated in line with the tech sector of leading Pacific Northwest jurisdictions such as Oregon, Washington or California could be expected to create another 114,000 jobs in B.C. directly in the technology industry, with another 73,000 in supporting positions.<sup>35</sup> Indeed this is what B.C.'s Tech sector anticipates it has the potential to do by 2029—double the size of the sector and the people employed in it.

## Global economic response 3: Increasing investment in people and the infrastructure of the services economy

Amidst a drive to find ways to grow the prosperity of an economy, a new focus is being given to ensuring that prosperity is better shared among the citizens of a jurisdiction. This is in part driven by the shift to a knowledge-based economy, where the nature of work itself is changing. In this new economic paradigm, education is one of the key factors supporting growth in productivity, innovation potential, and a country's overall competitiveness.<sup>36</sup>

Education is a core component of this and it extends beyond traditional K-12 and post-secondary education. The McKinsey Global Institute estimates that 8-9% of labour demand in 2030 will be for jobs that do not yet exist today.<sup>37</sup> This puts a greater emphasis on new skills and continuous learning for those just entering the workforce and those moving between jobs.

Despite high levels of education and heavy investment through K-12 and higher education, important gaps remain. One of the areas that Canada and its provinces have failed to adequately resource is training and development. On average, Canada's public spending on training programs is about half the OECD average and many times less than global leaders like Denmark and Finland.<sup>38</sup>

There is also a risk that the polarization of the labour market contributed to higher rates of inequality amongst different people working in different industries and regions of the province.<sup>39</sup> As an example, workers in the resource sector face significant uncertainty in the face of efforts to decarbonize the economy, particularly if there remains a lack of investment in re-training and transition support programming.<sup>40</sup>

<sup>31</sup>Innovation, Science and Economic Development Canada, Building a Nation of Innovators, 2019. [https://www.ic.gc.ca/eic/site/062.nsf/eng/h\\_00105.html](https://www.ic.gc.ca/eic/site/062.nsf/eng/h_00105.html)

<sup>32</sup>Canada's Economic Strategy Tables, The Innovation and Competitiveness Imperative: Seizing Opportunities for Growth, September 2018. [https://www.ic.gc.ca/eic/site/098.nsf/vwapj/ISED\\_C\\_SeizingOpportunities.pdf/\\$file/ISED\\_C\\_SeizingOpportunities.pdf](https://www.ic.gc.ca/eic/site/098.nsf/vwapj/ISED_C_SeizingOpportunities.pdf/$file/ISED_C_SeizingOpportunities.pdf)

<sup>33</sup>These companies include: AbCellera, Clio, Dapper Labs, Galvanize, GeoComply, Thinkific, Trulioo and Visier

<sup>34</sup>B.C. Innovation Commissioner, Putting Innovation to Work for British Columbia: Growing B.C. Companies, January 2020. [https://www2.gov.bc.ca/assets/gov/government/final\\_ic\\_report\\_2020.pdf](https://www2.gov.bc.ca/assets/gov/government/final_ic_report_2020.pdf)

<sup>35</sup>ibid.

<sup>36</sup>Sira, Elena et al., Knowledge Economy Indicators and Their Impact on the Sustainable Competitiveness of the EU Countries, Sustainability, May 2020. [https://www.researchgate.net/publication/341534658\\_Knowledge\\_Economy\\_Indicators\\_and\\_Their\\_Impact\\_on\\_the\\_Sustainable\\_Competitiveness\\_of\\_the\\_EU\\_Countries](https://www.researchgate.net/publication/341534658_Knowledge_Economy_Indicators_and_Their_Impact_on_the_Sustainable_Competitiveness_of_the_EU_Countries)

<sup>37</sup>Innovation, Science and Economic Development Canada, Building a Nation of Innovators, 2019. [https://www.ic.gc.ca/eic/site/062.nsf/eng/h\\_00105.html](https://www.ic.gc.ca/eic/site/062.nsf/eng/h_00105.html)

<sup>38</sup>Munro, Daniel, Public Policy Forum. Skills, Training and Lifelong Learning, March 2019. <https://ppforum.ca/wp-content/uploads/2019/03/SkillsTrainingAndLifelongLearning-PPF-MARCH2019-EN.pdf>

This shift is already underway in other jurisdictions. The EU in particular has seen its member nations develop several different approaches that shift the conversation and expectation of labour from a “cost” to an “investment”.

This isn’t just about education and on-the-job training, however. In order to support workers and families in a service-driven economy, we need to think differently and broaden the definition for what we consider to be economic infrastructure. Nowhere is this more important or urgent, than childcare. Studies have shown just how

significant childcare can be for the economy, with an IMF study in 2017 estimating subsidized childcare could increase national GDP by up to 4%. The commitments from both the provincial and federal government in B.C. to advance affordable childcare isn’t just good for people—it’s good for economic growth.

## Global economic response 4: Redefining economic competitiveness

Remaining competitive in this changing global economy is one of the most essential priorities for jurisdictions around the world. What that means in practice, however, is changing significantly. Competitiveness is not simply the sum of economic output that a jurisdiction produces but is impacted also by the social, environmental and cultural elements that make a jurisdiction unique. Furthermore, a “competitive” jurisdiction must be responsive to the headwinds and trends of the global economy, determining when to mitigate, when to adapt and when a fundamental rethink is in order.

For much of the last three decades, the discourse in B.C. has focused on our relative tax competitiveness compared to other jurisdictions. While this plays a role in a narrower assessment of specific FDI decisions, it is an insufficient metric in developing a competitiveness strategy for the knowledge economy.

As noted above, intangible assets, innovation and investments in people are the primary sources of competitiveness going forward. For B.C. to remain competitive over the long term, it needs to acknowledge the role that intangibles already play in the

economy, and re-think the assumptions it makes about taxation, IP, competition and FDI. As others have pointed out, we need to put in place policies that support the development, financing and export of intellectual property just as much as physical goods.

Nowhere will this be more important than the province’s efforts to mitigate and adapt to the impacts of climate change. B.C. was an early leader on climate change and Clean BC has provided a sound roadmap for the province’s GHG reduction work. But as the conversation shifts to building a dynamic, growing and clean economy, we are starting to fall behind. The United States’ pivot under President Biden to an all-of-government approach, intended to secure for the USA as large a share as possible of the global economic boom arising from action to greening the economy, stands in sharp contrast to the more siloed approach B.C. has taken to date.

A competitiveness strategy that can deliver sustained, equitable and clean growth for our province will require a focused vision that extends beyond the election cycle, and start by telling a new story about where B.C. strengths—and future—lies.

<sup>39</sup>Public Policy Forum, New North Star, Canadian Competitiveness in an Intangibles Economy, April 2019. <https://ppforum.ca/wp-content/uploads/2019/04/PPF-NewNorthStar-EN4.pdf>

<sup>40</sup>Sean Speer and Brian Dijkema, Cardus, Fuelling Canada’s Middle Class: Job Polarization and the Natural Resource Sector, December 2020. <https://www.cardus.ca/research/work-economics/reports/fuelling-canadas-middle-class/>

## A new narrative for A 21<sup>ST</sup> CENTURY B.C. ECONOMY

**It’s time for a new story about the B.C. economy—where we are now and where we’re going. This isn’t about discarding or ignoring where our strengths have been historically, or the industries that helped build our province.**

It’s about acknowledging the changing global economy and the impacts it is already having on British Columbians, recognizing where economic growth will occur in future, and addressing how we can remain competitive.

For too long the conversation in B.C. has stayed grounded in the narrative that we were, are, and always will be, a resource-based export economy. We’ve clung to this even as the economy changed, and B.C. became a knowledge and service-based economy. It is as if we believe that the global economy will wait or perhaps even come to us and that our high levels of prosperity can be sustained indefinitely without investment.

Attempting to preserve a status quo that downplays the changes that are taking place in the global economy will only see us fail to seize new opportunities for inclusive growth and prosperity.

## Setting new priorities

**We can no longer afford to celebrate economic growth regardless of where it takes place. As Max Roser from “Our World in Data” said in May 2021:**

**"Growth doesn’t just have a rate, it also has a direction and the direction we choose matters—for our own happiness and for achieving a sustainable future.<sup>50</sup>"**

This can be a guiding statement for B.C. as we take steps to embrace the knowledge economy, shifting our focus from tangible to intangible assets. Taking lessons from the trends we see already taking root in B.C., and from the review of how the global trends and headwinds are affecting the economies around the world, we can bring a new focus for economic development in BC. A focus that emphasizes three key and mutually reinforcing priorities:

## Priority 1

Capture better data on B.C.'s economy, to identify the economic drivers that drive long-term prosperity and competitiveness in the knowledge economy

**We know that the service sectors contribute more to jobs, both current and future employment, GDP and exports than any other sector. And yet in B.C., we have little data or analysis that ensures this reality is flowing into our economic decision making.**

All growth in the service sector isn't equal—our past reliance on housing, real-estate related services and associated construction leaves us over-exposed to market corrections and relying on growth that is driving inequality and unaffordability in our province. Housing is, in fact, a worrisome example of the consequences of celebrating growth without consideration of its direction. Even as housing made up a larger and larger share of our overall economic activity, the crisis of affordability accelerated. This is often expressed as the number one concern of not only those trying to become homeowners or find an affordable place to rent, but also of businesses trying to attract and retain their workers.

Another example is the focus on landing foreign direct investment (FDI) in the natural resource sector, even if the projects create limited jobs and have limited future growth potential.

Allowing an overheated housing market to drive growth, or chasing large FDI decisions for the export of resources distracts us from where our focus must be: building new economic drivers that provide growth and employment for British Columbians.

At a national level, similar calls to action have usually focused on the need for new “industrial policies” that show an understanding of the role that intangibles play and the importance of innovation in growing our economy.<sup>51</sup> A similar prescription can be made for B.C. – we need to be doing a re-assessment of where our strengths and weaknesses lie, and which sectors are most poised to compete and become the new engines for long term, sustainable growth.

This won't be easy. It involves efforts to better track and report on digital and intangible-based economic growth and policies that reinforce business investment in R+D. Perhaps most fundamentally, it requires setting a clear and consistent vision for economic growth.

As Max Roser said—growth has a direction, and that direction matters. We need to start being deliberate about which sectors of the economy we are relying on to set us up for long-term prosperity and competitiveness in the knowledge economy.

## Priority 2

Embrace technology and innovation as the critical driver of economic growth and resilience with increased investment in tech talent and support for entrepreneurs to scaleup

**Perhaps no statement strikes closer to home in B.C. than this line from Canada's Economic Strategy Table's report “The Innovation and Competitiveness Imperative: Seizing Opportunities for Growth”:**

**“...we continue to fret about Canada's lacklustre innovation performance, in part because it represents a forgone opportunity to do even better than it has – accepting bronze when it should be going for gold.”<sup>52</sup>**

Canada could easily be replaced with B.C. in this statement.

Across the economy, we have undervalued the importance that innovation plays in ensuring we remain competitive, and that economic success today is sustainable. Furthermore, as the Economic Strategy Table noted, it's not just about whether we are or aren't supporting innovation, it's about asking whether we are seizing every opportunity we have in front of us.

This isn't about investing in one sector at the expense of others. Innovation and the associated application of new techniques and technologies offers nearly every sector of our economy an opportunity to increase productivity, increasing both revenue and exports.

It is about investing sufficiently in tech talent that growth of B.C.'s tech sector is not constrained. It is about supporting home-grown tech companies to startup and to scaleup so we grow the anchor companies of B.C.'s future. And above all, it's about prioritizing the economic activity that will emphasize innovation and technology's overall share of provincial GDP.

We need to care about where growth comes from and align our planning with a strategic vision for what we hope to accomplish.

## Priority 3

Increase access to education and skills training and invest in the infrastructure of the services economy

**The long overdue shift of viewing people not as a labour cost to the economy but as the primary source of economic value—something to invest in and grow—is perhaps the most important change occurring in the global economy. This offers new opportunities for growth, and a new reconsideration of who benefits within an economy and how can we share prosperity more effectively.**

More than ever before B.C.'s economic future relies on its people – its ability to educate, train and re-train and hold onto the workers in our workforce. Although B.C.'s K-12 education system is one of the top-performing in the world, we do not have the same record when it comes to supporting those currently in the workforce. And we haven't done enough to create pathways for under-represented groups to participate in the economic sectors that are growing.

The transformations that are coming – whether they are driven by the decarbonization of the economy or automation and digitization of the economy—will present significant hurdles for British Columbians across our province and the economy. While B.C. should not be trying to protect a job that no longer makes sense in the emerging economy, we must put the systems in place to support the workers that hold those jobs. We need to remove the uncertainty of career dislocation not by pretending the same job will exist forever, but by ensuring that workers never fear they will be left behind in the first place.

The development of a people-centric economic strategy is also the best way we will be able to attract talent from across the world to come to British Columbia. This goes hand and hand with the need to be more deliberate about where growth occurs in our economy.

<sup>51</sup>Public Policy Forum, New North Star, Canadian Competitiveness in an Intangibles Economy, April 2019. <https://ppforum.ca/wp-content/uploads/2019/04/PPF-NewNorthStar-EN4.pdf>

<sup>52</sup>Canada's Economic Strategy Tables, The Innovation and Competitiveness Imperative: Seizing Opportunities for Growth. September 2018. [https://www.ic.gc.ca/eic/site/098.nsf/vwapj/ISEDC\\_SeizingOpportunities.pdf/\\$file/ISEDC\\_SeizingOpportunities.pdf](https://www.ic.gc.ca/eic/site/098.nsf/vwapj/ISEDC_SeizingOpportunities.pdf/$file/ISEDC_SeizingOpportunities.pdf)

# Bringing it all TOGETHER

**This report doesn't pretend to provide an answer to every question, but instead to ask new questions about what we know about B.C.'s economy, and to challenge some of the prevailing narratives about what we need to do to build a more inclusive, innovative and sustainable economy in B.C.**

Now more than ever, we need to be having this conversation. The global economy is changing faster than ever before. We are driving at speed into the future and we need to keep our eyes firmly on the road ahead, not looking backwards in the rearview mirror. B.C. cannot afford to allow 20<sup>th</sup> century economic thinking to guide 21<sup>st</sup> century decisions.

We hope this report provides useful information to the B.C. Government as it develops and releases a new economic framework in the Fall of 2021. We anticipate it will inform the Federal government's thinking on how to extend and develop Canada's innovation economy and the work of the new B.C. Regional Development Agency. We believe it will provide a helpful industry perspective for post-secondary institutions as they develop their strategic plans for the future. And we hope it sparks a wider conversation about a future economy for B.C. that is full of potential and opportunity for all.

It's time for government at all levels to do more to support technology and innovation as the key drivers of our service-based economy, and as pillars of our shared economic future.

It's time for government at all levels to recognize that B.C.'s economic future relies on its people and to invest more in education and skills training.

It's time to capture better data on today's economy and identify the economic drivers that drive long-term prosperity and competitiveness.

It's time for a new narrative about B.C. and our shared economic future.



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