



**METRO HUB
SPOTLIGHT**

Metro Vancouver

Close-up on the bio-economy

LABOUR MARKET
INTELLIGENCE





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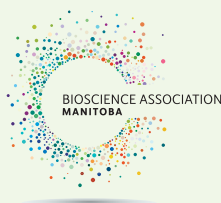


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BioTalent Canada's 2021 series of labour market intelligence (LMI) reports, *Close-up on the bio-economy*,¹ aims to provide the perspective bio-economy organizations need to find, recruit, train and retain talented teams based on a real, meaningful understanding of the labour market. For the first time, the data offers deeper insights into the labour market conditions specific to individual metro hub regions within Canada. This report looks at the conditions in **Metro Vancouver**.² Because of the small sample size for this spotlight, caution should be used when comparing to national data or data from other regions.

¹ The series includes a national LMI report, a demand and supply outlook, five regional spotlights, three metro hub spotlights and a number of additional research briefs.

² Metro Vancouver includes the Greater Vancouver Regional District.

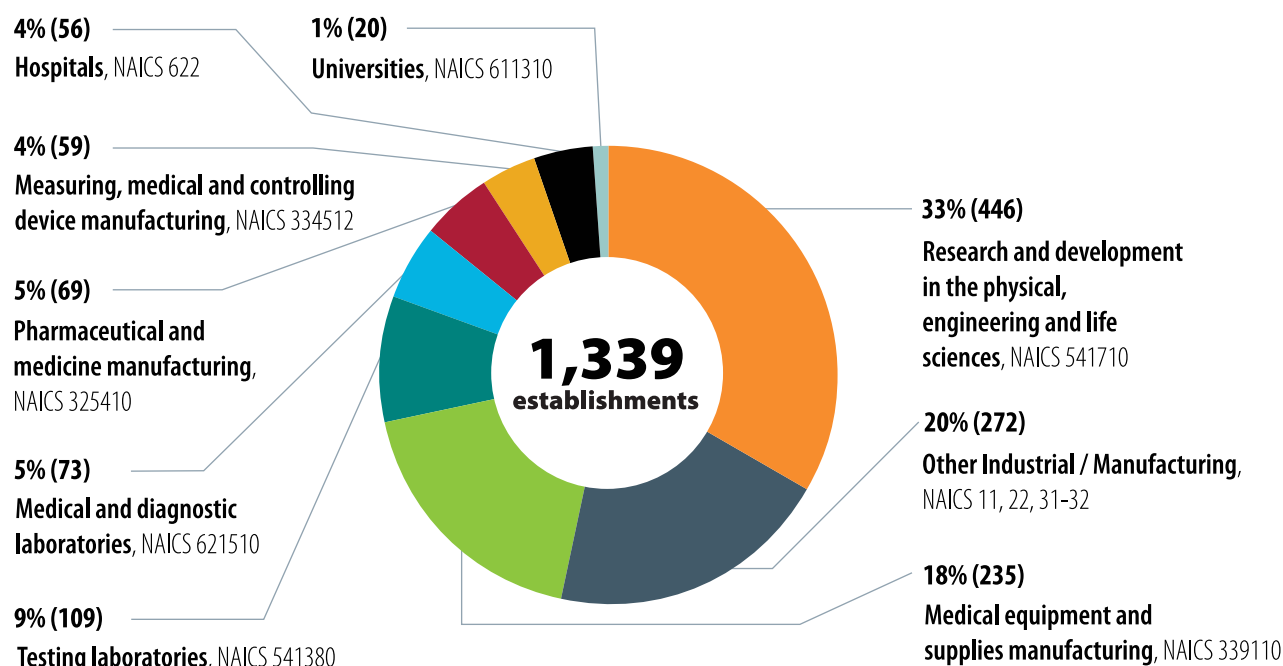
Who's in the Metro Vancouver bio-economy?

The Metro Vancouver bio-economy contains some **1,300 organizations**, which collectively employed around **16,000 people** in 2019 in a wide range of functions, from researchers to distribution and logistics managers.

Employers in profile

Small and medium-sized companies dominate. More than half (57%) have been in business fewer than 15 years. According to the North American Industry Classification System (NAICS), organizations dedicated to physical, engineering and life sciences R&D (NAICS 541710) make up one-third (33%) of the Metro Vancouver bio-economy.

FIGURE 1. Bio-economy establishments by NAICS industrial sector, Metro Vancouver

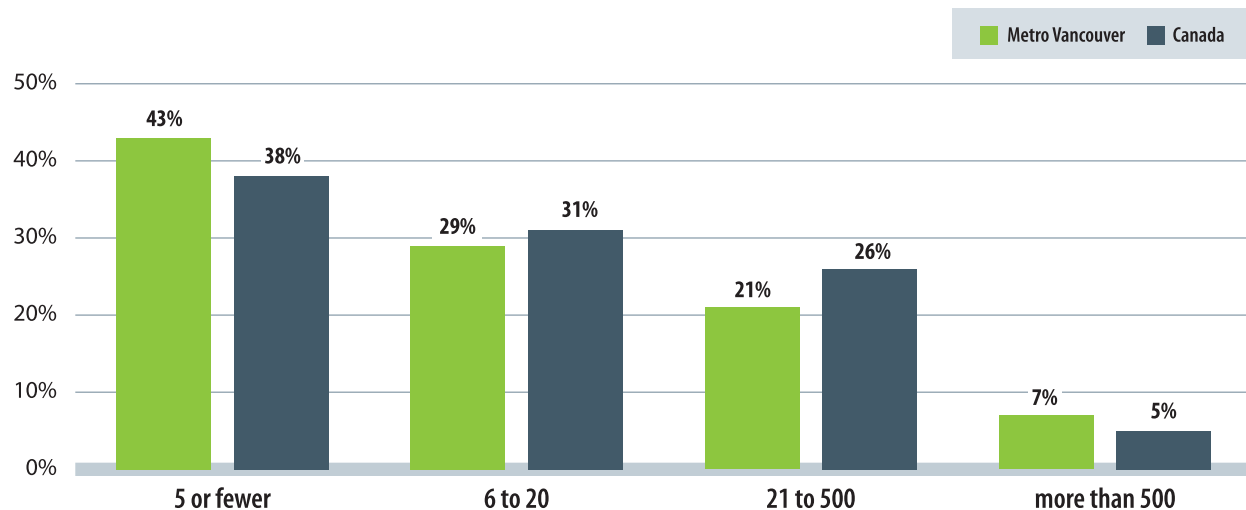


Note: Percentages may not add up to 100% due to rounding.

Source: BioTalent Canada Modeling and Projections (2020)

Three-quarters have 20 or fewer full-time employees.

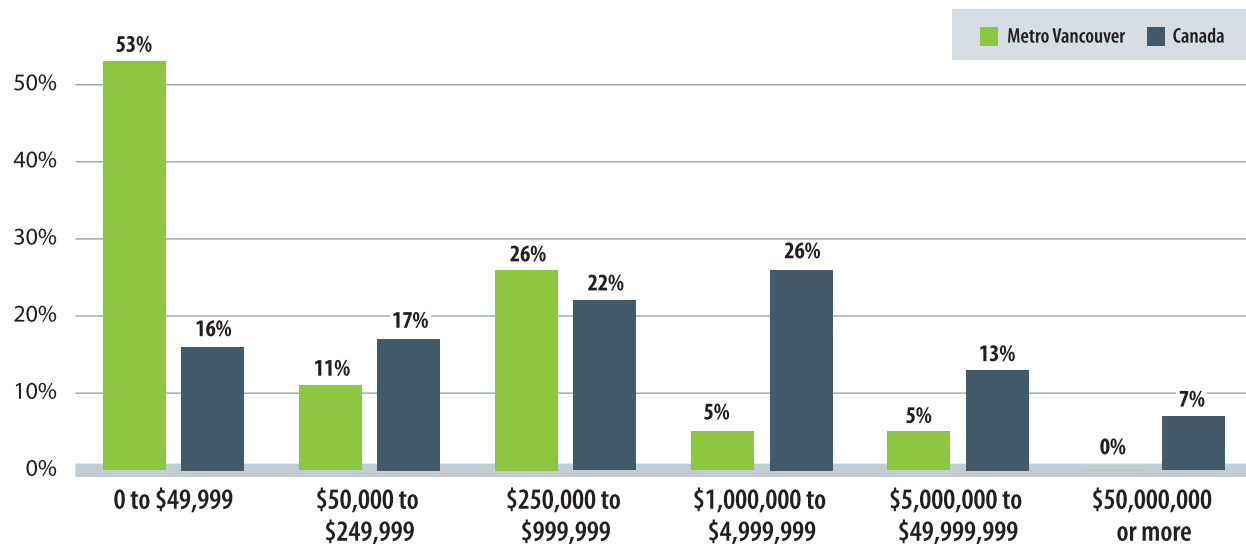
FIGURE 2. Bio-economy companies by number of full-time employees, Metro Vancouver vs. national



Source: BioTalent Canada, Survey of Employers 2020

90% of companies have annual total gross revenues of less than \$1 million.

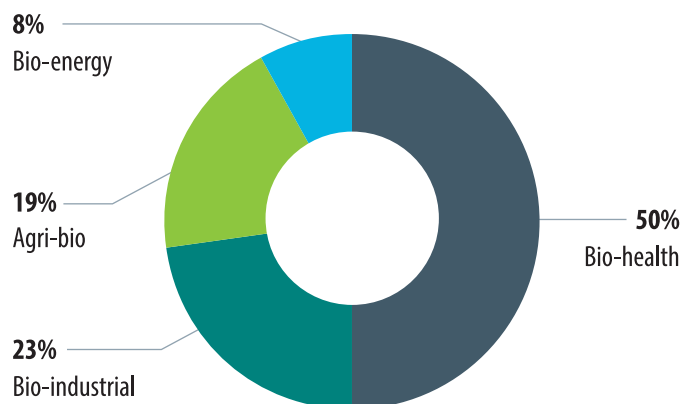
FIGURE 3. Bio-economy companies by annual total gross revenue, Metro Vancouver vs. national



Source: BioTalent Canada, Survey of Employers 2020

Bio-health is the largest sub-sector in Metro Vancouver.

FIGURE 4. Companies by primary sub-sector, Metro Vancouver



Source: BioTalent Canada, Survey of Employers 2020

Workers in profile

R&D and manufacturing account for nearly half of bio-economy jobs in Metro Vancouver. Compared to the national profile, the Metro Vancouver bio-economy employs a higher proportion of visible minorities (an average of 29%).

TABLE 1. Employment by job category and sub-sector, Metro Vancouver

Job category	Total	Agri-bio	Bio-energy	Bio-health	Bio-industrial
Research and development	26%	27%	26%	27%	23%
Manufacturing and production	20%	26%	34%	14%	30%
Management, finance and administration	12%	14%	16%	12%	13%
Distribution and logistics	6%	7%	4%	6%	6%
Quality control and quality assurance	5%	6%	3%	5%	5%
Marketing, business development and sales	5%	7%	4%	5%	6%
Information technology	3%	2%	3%	4%	3%
Legal and regulatory affairs	2%	2%	3%	2%	2%
Other	20%	9%	7%	25%	13%

Source: BioTalent Canada Modeling and Projections (2020)

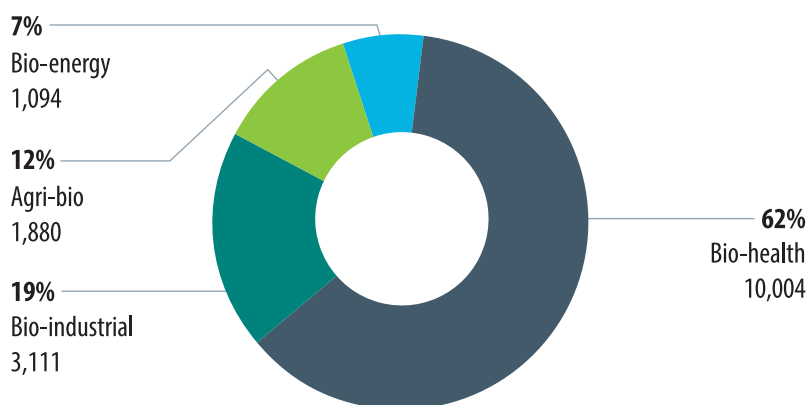
TABLE 2. Top five industries by NAICS code and estimated employment, Metro Vancouver

Industry	Bio-economy employment	Share of total bio-economy employment
R&D in physical, engineering and life sciences (NAICS 541710)	3,140	20%
Pharmaceutical and medicine manufacturing (NAICS 3254)	3,010	19%
Testing laboratories (NAICS 541380)	1,880	12%
Hospitals (NAICS 6220)	1,840	11%
Medical equipment and supplies manufacturing (NAICS 339110)	1,410	9%
Other	4,780	29%
Total	16,060	100%

Source: BioTalent Canada Modeling and Projections (2020)

Nearly $\frac{2}{3}$ of all employees work in bio-health, and almost $\frac{1}{5}$ work in the bio-industrial sub-sector.

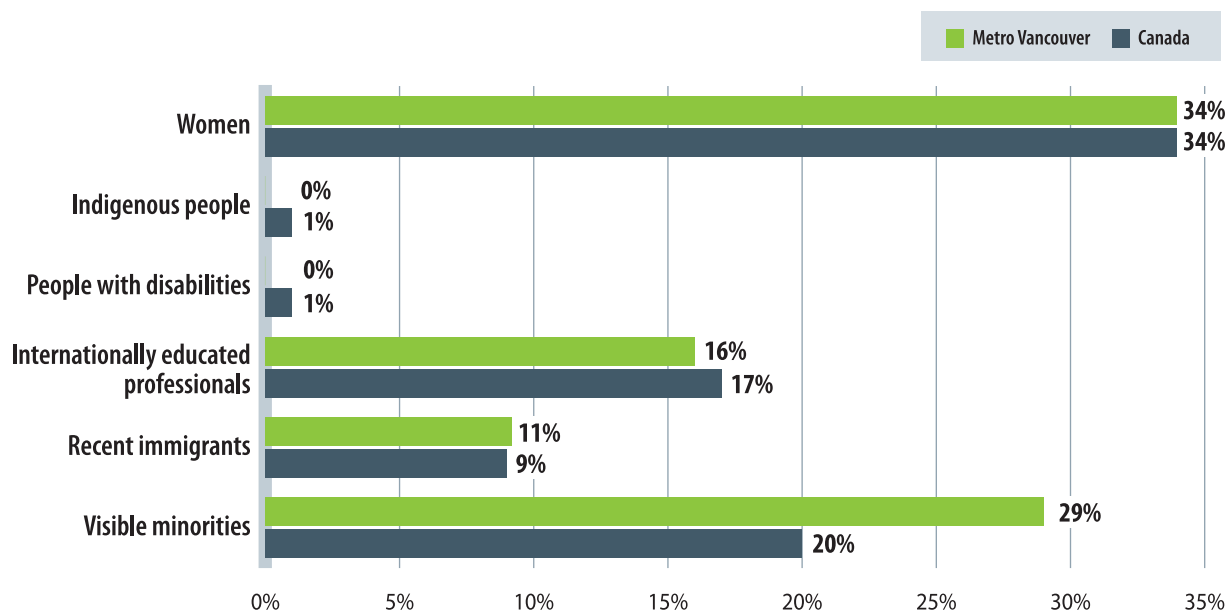
FIGURE 5. Bio-economy employment estimates by sub-sector, Metro Vancouver



Source: BioTalent Canada Modeling and Projections (2020)

Even with a high proportion of visible minorities, the Metro Vancouver bio-economy could still be more diverse.

FIGURE 6. Average proportions of workers by equity-seeking group status, Metro Vancouver vs. national



Source: BioTalent Canada, Survey of Employers 2020



Metro Vancouver labour market outlook

By the end of the decade, the Metro Vancouver bio-economy will need an **additional 4,860 workers**, for a total workforce of **approximately 17,700 people**. Despite a 5.9% contraction in Metro Vancouver’s overall 2020 GDP caused by COVID-19, the economy is expected to rebound within the short term and return to normal growth levels for the medium/longer term.³ Most additional workers will be needed to meet replacement demand.⁴ R&D and manufacturing roles are among the top three areas where Metro Vancouver employers in all four bio-economy sub-sectors need to hire (Tables 3 and 4).

TABLE 3. 2029 hiring requirements by sub-sector, Metro Vancouver

Sub-sector	Workers needed	Demand type	Key roles
Bio-health	3,400	Mostly replacement	<ul style="list-style-type: none">▶ R&D (22%)▶ Other (22%)▶ Manufacturing (17%)
Bio-industrial ⁵	1,000	Mostly replacement	<ul style="list-style-type: none">▶ Manufacturing (27%)▶ R&D (19%)▶ Management, finance and administration (17%)
Agri-bio	900	Significant expansion in 2021, then virtually all replacement	<ul style="list-style-type: none">▶ Manufacturing (33%)▶ Management, finance and administration (21%)▶ R&D (14%)
Bio-energy	180	Virtually all replacement	<ul style="list-style-type: none">▶ Manufacturing (50%)▶ R&D (31%)▶ Management, finance and administration (13%)

Source: BioTalent Canada Modeling and Projections (2020)

3 This study considered three time periods for its economic forecasts: immediate (to explore pandemic-related changes between 2019 and 2020), short term (2021 to 2024) and medium/longer term (2025 to 2029).

4 Replacement demand refers to the need to hire workers to replace retirees or individuals leaving the workforce for other reasons.

5 Because of the strong negative expansion of 2021, this year has been treated as an outlier and is excluded from hiring estimate forecasts for the Metro Vancouver bio-industrial sub-sector.

TABLE 4. Bio-economy hiring requirements by job function, Metro Vancouver

Job function	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total	%
Manufacturing and production	180	140	120	110	60	100	110	100	90	1,010	21%
Research and development	(-60)	150	140	130	50	140	150	150	140	990	20%
Management, finance and administration	160	100	90	80	40	80	90	80	80	800	16%
Distribution and logistics	70	40	40	30	10	40	40	40	30	340	7%
Marketing, business development and sales	110	40	30	30	10	30	30	30	30	340	7%
Quality control and assurance	20	30	30	30	10	30	40	30	30	250	5%
Information technology	20	20	20	20	<10	20	20	20	20	160	3%
Legal and regulatory affairs	50	10	10	10	10	10	10	10	10	130	3%
Other	(-120)	130	130	130	70	130	130	130	130	860	18%
Total	430	660	610	570	260	580	620	590	560	4,880	100%

Note: Numbers have been rounded.

Source: BioTalent Canada Modeling and Projections (2020)

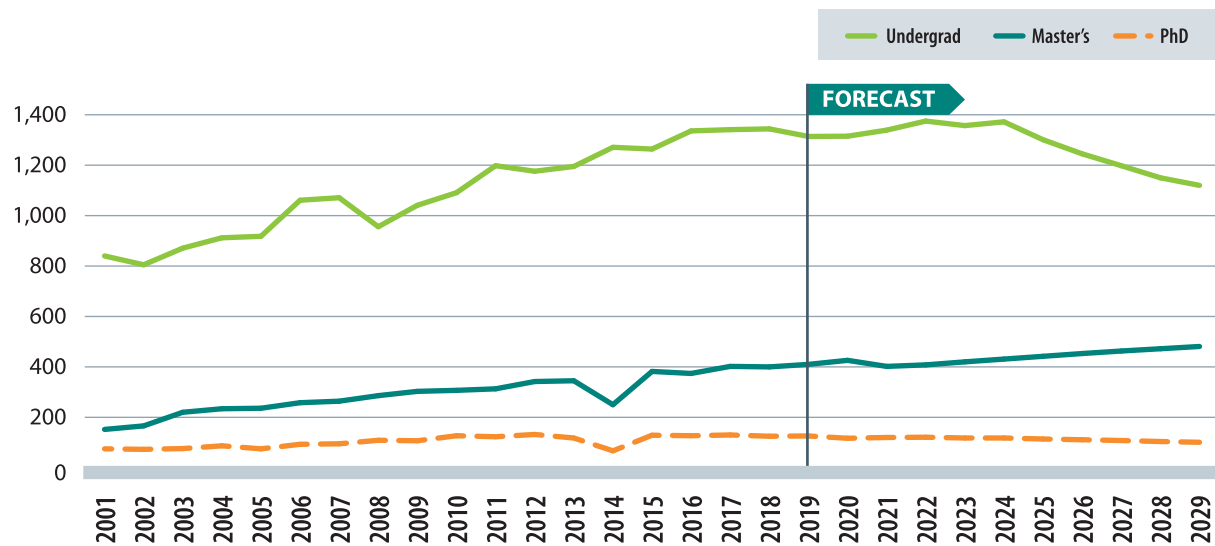
Meeting demand

The youth share of the population,⁶ historically critical to the labour supply, has been steadily declining since 2000 and is expected to continue to fall. At the same time, the share aged 55 years and older continues to rise, leading to an imbalance where there are not enough youth entering the workforce to replace those retiring. As a result, Metro Vancouver bio-economy companies will have to **recruit more heavily from under-tapped talent pools**, including recent immigrants and internationally educated professionals. A large proportion of immigrants to Canada settle in large urban centres like Metro Vancouver, and many have relevant post-secondary education or are students in relevant fields.

New talent pools will be important because **domestic enrolment in post-secondary bio-economy-related programs is expected to decrease** over the forecast period (beginning in 2019), driven by decreases in undergraduate enrolment. Growing enrolments by international students at Metro Vancouver institutions may help mitigate some of the domestic losses.

⁶ The definition of “youth” varies depending on the source. While BioTalent Canada defines “youth” as under 30, the source data for this report defines youth as under 25.

FIGURE 7. Domestic degree completions by study level, Metro Vancouver



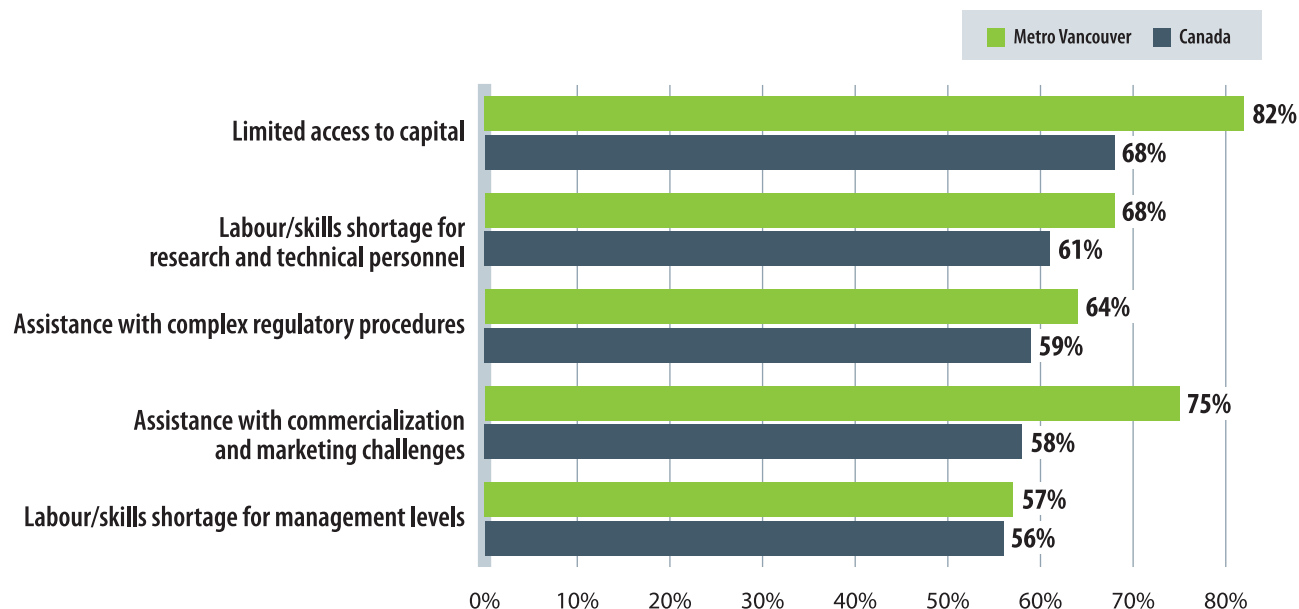
Source: Statistics Canada and BioTalent Canada Forecast



HR challenges in Metro Vancouver

HR-related obstacles impede bio-economy company development.

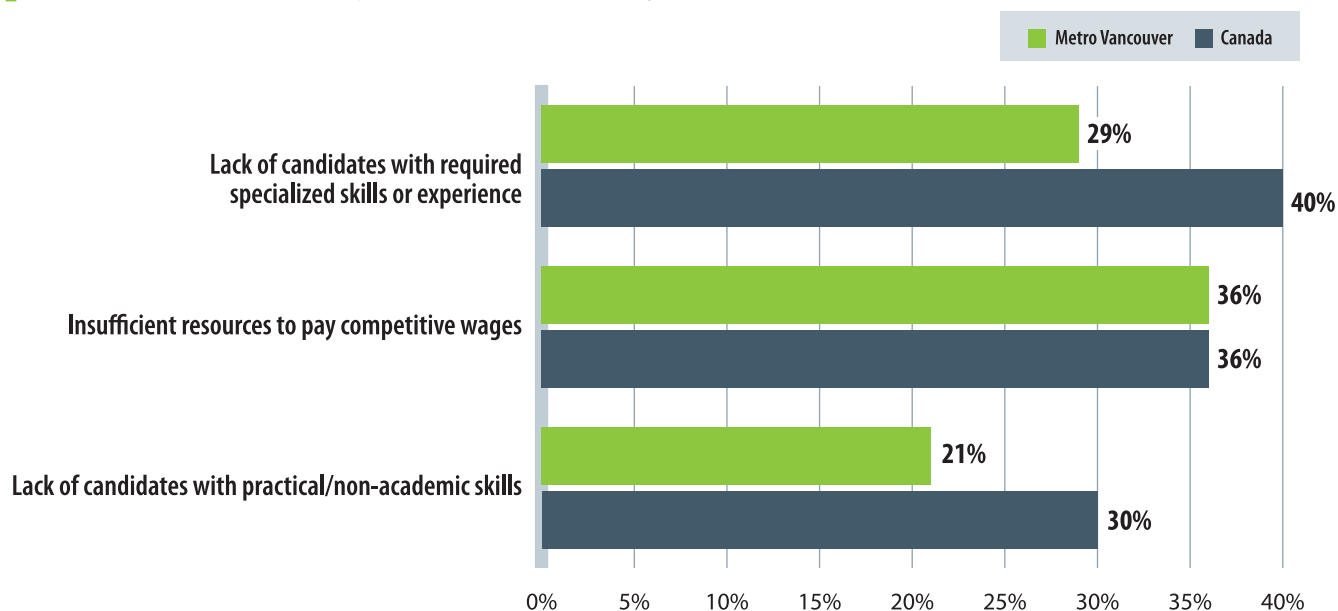
FIGURE 8. Modest and major obstacles to company development, Metro Vancouver vs. national



Source: BioTalent Canada, Survey of Employers 2020

One-third of employers cite insufficient resources to pay competitive wages as a top HR challenge.

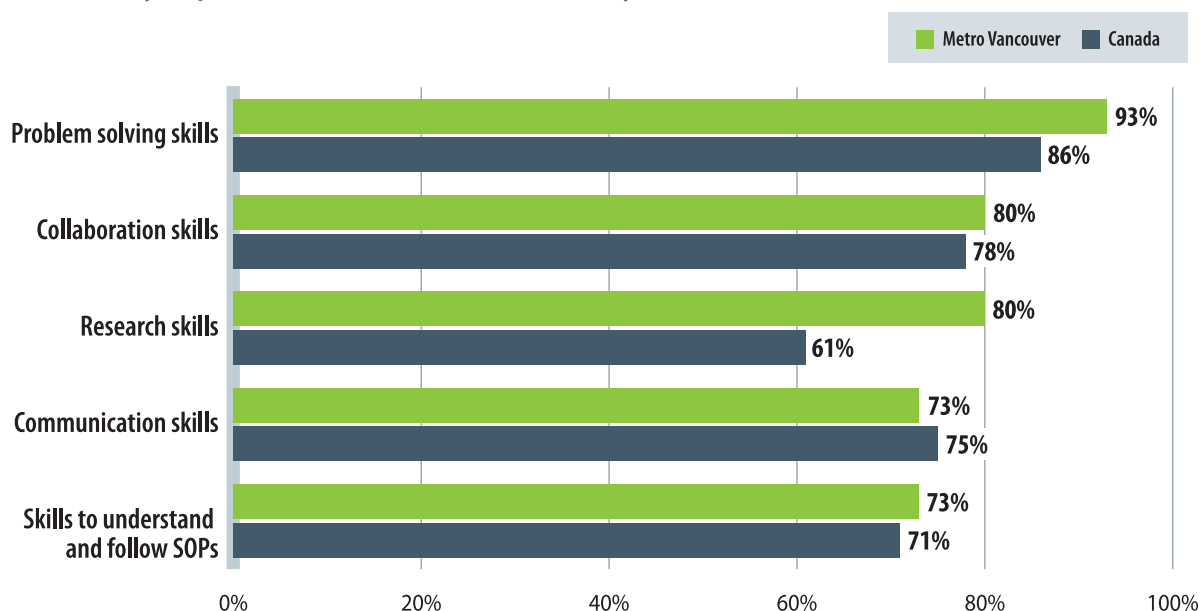
FIGURE 9. Top HR challenges for the bio-economy, Metro Vancouver vs. national



Source: BioTalent Canada, Survey of Employers 2020

Problem-solving skills are key.

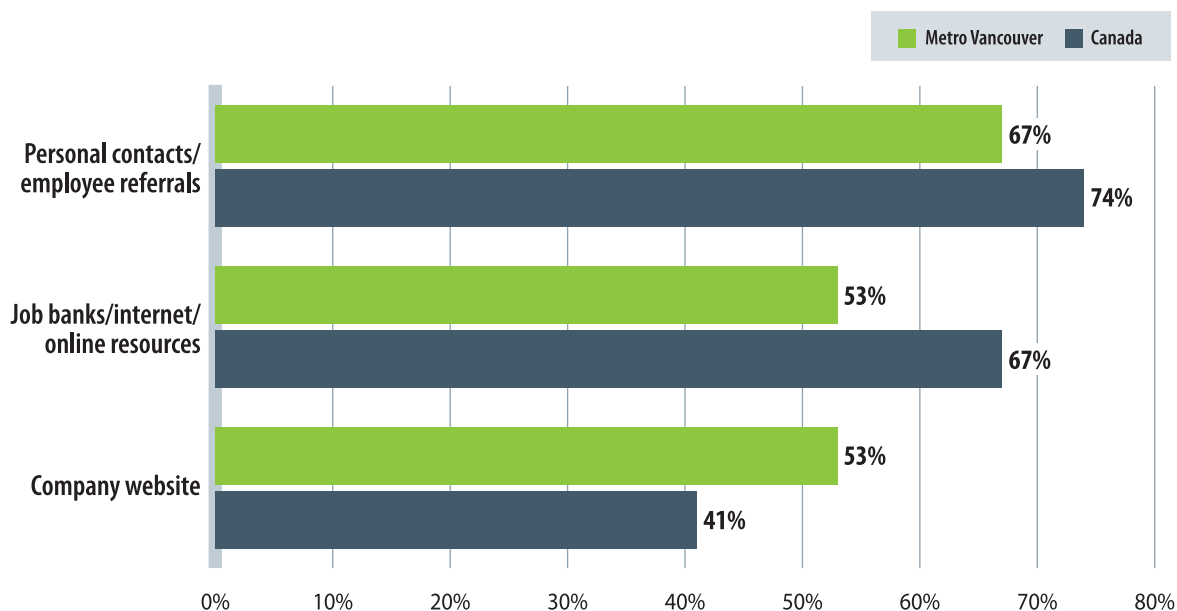
FIGURE 10. “Very important” skills for the bio-economy, Metro Vancouver vs. national



Source: BioTalent Canada, Survey of Employers 2020

Recruitment through personal contacts may make it harder to reach and hire from a diverse talent pool.

FIGURE 11. Recruitment approaches, Metro Vancouver vs. national



Source: BioTalent Canada, Survey of Employers 2020





Path forward

Metro Vancouver is Canada's third-largest metropolitan area by population and a hub for both industry and education. Its five universities account for 60% of university enrolments in BC. The area attracts students from around BC, outside the province and from abroad, and many stay after graduation, drawn to employment opportunities and the urban Vancouver lifestyle. High housing costs coupled with the increase in remote work caused by COVID-19 have led to a greater number of people moving out of the area, but it remains to be seen whether that trend will continue and how it might affect the area's labour supply.

Many Metro Vancouver bio-economy companies report difficulty accessing capital and resources, affecting their ability to attract talent with competitive wages. Subsidies and other instruments may be needed to help these firms get the talent they require. A good number are already struggling to fill many roles, and their challenges are expected to worsen throughout the decade.

To meet their talent needs, they will have to change their approaches to recruitment, training and other HR practices. [See our national LMI report and related products](#) for more on Canada's bio-economy labour market, including recommendations on how to meet sector needs going forward.

A total of 28 companies from the Vancouver region bio-economy participated in the surveys informing this report. The margin of error with this sample size is approximately +/-19%, 19 times out of 20. For this reason, caution is recommended when interpreting the results of this survey.



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The *Close-up on the bio-economy* LMI series is published as part of BioTalent Canada's mission to provide bio-economy stakeholders with valuable, evidence-based labour market intelligence and job-ready human resources.

It includes:

- ▶ **National LMI report**
- ▶ **Demand and Supply Outlook**
- ▶ **Regional spotlights** (Atlantic Canada, Quebec, Ontario, Prairies, Western Canada)
- ▶ **Metro hub spotlights** (Greater Montreal, Greater Toronto Area, Metro Vancouver)
- ▶ Research briefs on topics such as bio-economy education and work-integrated learning

Visit biontalent.ca/LMIStudy to download these and other LMI reports, briefs and articles.



Research partners

The following researchers contributed to the development of this research and report:

- ▶ DPM Research Inc.
- ▶ Prism Economics & Analysis Inc.
- ▶ EKOS Research Associates Inc.
- ▶ Ipsos

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