

Vancouver Economy Report

Film & TV:
**50 years of
physical production
in Vancouver
and BC**

Plus
**discover the
Circular Economy
of Food in Vancouver**

Economic Snapshot
Poverty Explained
Doughnut Economics

Winter 2022/23



**VANCOUVER
ECONOMIC
COMMISSION**



Are buzzwords getting in the way of realizing and scaling common-sense solutions for our economy?

Concepts like the circular economy, beyond GDP, decarbonization, economic reconciliation and the just transition may seem like buzzwords with little relevance to our daily lives. However, many people are already engaging in activities aligned with these concepts.

Buying things off Marketplace or Craigslist and bringing reusable containers are examples of circular behaviour. A driver opting not to buy a private vehicle and instead becoming a member of a car sharing co-operative is a decarbonization choice. Helping workers reskill or adapt to changing employment conditions is a textbook action of the just transition. Tracking your progress on managing food waste and mitigating poverty could be beyond-GDP initiatives, while a Vancouver company that audits their procurement practices to ensure that a percentage of vendors are Indigenous-owned and operated is a modest example of economic reconciliation in action.

Many of these actions are also common-sense ones, or a simple matter of aligning values with personal and business spending. Many people might be surprised to learn they already engage in circular or decarbonizing behaviours, or that

their desire for wages on which they can live, or child care that is affordable, have a place in economic models and theory. Many businesses may be surprised to know they're already part of the just transition.

Do any of these actions sound familiar to you? What is propelling you forward? What is holding you back?

One of the keys to creating impact and transforming inefficient and inequal systems for the better is to draw together individual and ad hoc behaviours – to unify and scale them. If this is work you are interested in getting involved in, be sure to reach out to the Vancouver Economic Commission.

Tell us what you think

Thank you for downloading the Vancouver Economic Commission's latest economy report. As you read it, please note we are always open to feedback to improve this publication. We invite you to complete our brief survey on its value to you.

[Provide Feedback](#)

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VEC respectfully acknowledges that it is located and operates on the unceded ancestral territories of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and səliłwətaʔ / səliłwitulh (Tsleil-Waututh) Nations.



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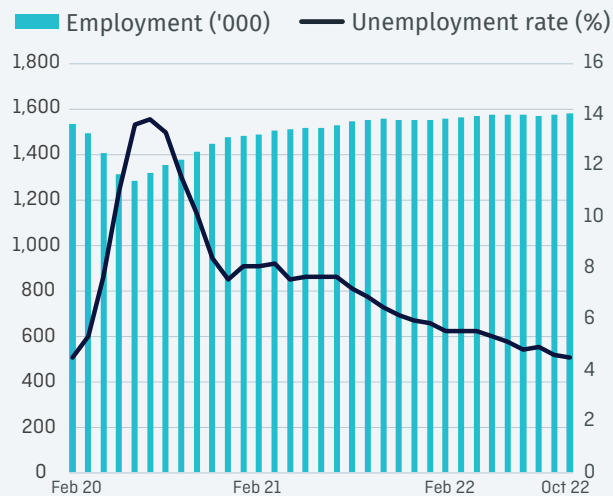


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Metro Vancouver Employment



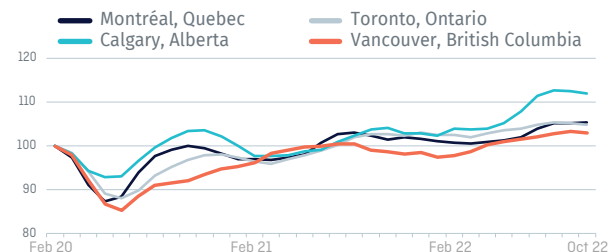
Source(s): VEC Analysis; [Labour Force Survey](#), Statistics Canada

Metro Vancouver employment: levelling out

Total employment in Metro Vancouver continues to surpass its pre-pandemic levels, a trend that started in summer 2021. However, in summer 2022 more than half of all Canadian metropolitan areas experienced a decrease in employment, including Metro Vancouver. Employment gains include education (+6,900), finance, insurance, real estate, rental and leasing (+2,600), with total employment in October 2022 jumping to 1,546,700 (+0.3% from September 2022). Vancouver's unemployment rate has now recovered to pre-pandemic levels too, reaching a low of 4.4%.

Employment Indexes

55 years and over, February 2020 = 100

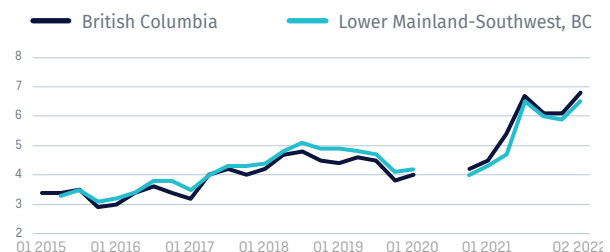


Employment rebounding slowly: for males

Male workers have recovered more slowly from the pandemic than females within Vancouver. Compared with other major Canadian metropolitan cities, this group's employment index (February 2020 = 100) reached only 103.0 in October 2022, with a decrease in part-time jobs across almost all ages. Conversely, female workers have surpassed their pre-pandemic levels since summer 2021. Although there's a decrease in part-time jobs, gains can be seen in all full-time jobs, and for young women in particular (+20.1% from February 2020 to October 2022).

Source(s): VEC Analysis; [Labour Force Survey](#), Statistics Canada

Job Vacancy Rate*, (%)



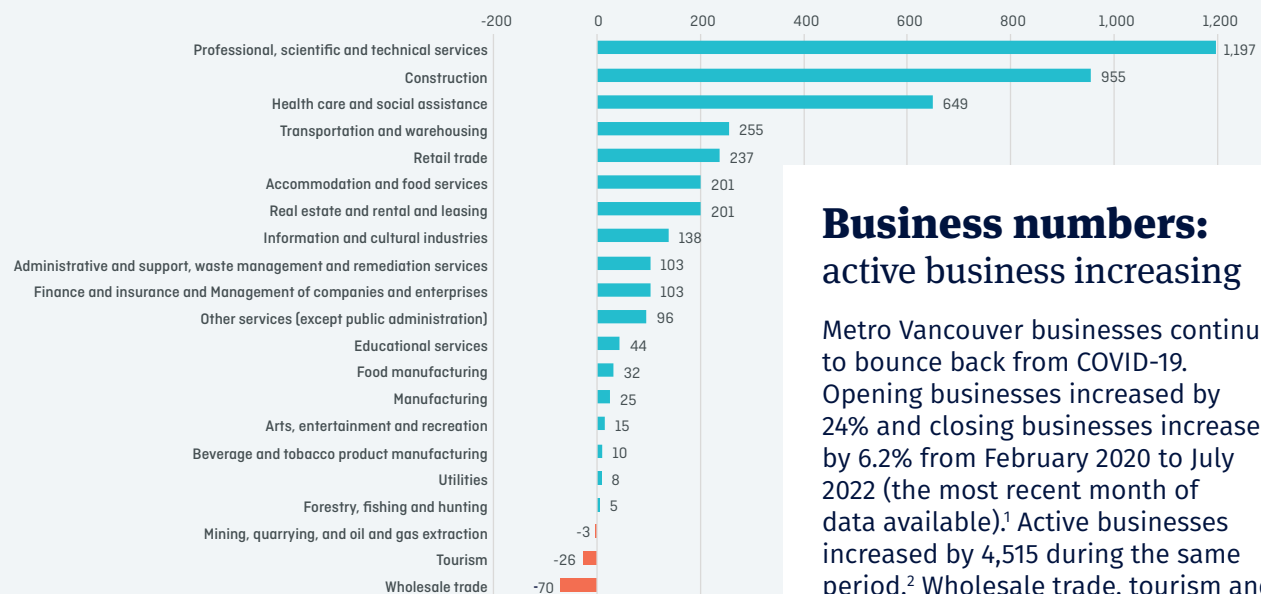
Job vacancies: second highest in the country

Job vacancies have reached a new high across Canada, especially in healthcare and social assistance. The job vacancy rate in British Columbia reached 6.8% in Q2 2022 – the second highest in Canada. During this period, there was less than one unemployed person for every job vacancy in BC (0.8). From Q1 2020 (when the global pandemic began) to Q2 2022, British Columbia saw the biggest job vacancy increases in accommodation and food services, and building construction. Unfortunately, difficulties in hiring new employees – a trend that arose during the pandemic – is likely to get worse.

Source(s): [Job Vacancy and Wage Survey](#), Statistics Canada
 *number of job vacancies expressed as a percentage of labour demand
 Note: Q2 and Q3 2020 data are unavailable due to COVID-19 pandemic

Metro Vancouver Business Numbers

Experimental estimates, Active Businesses, February 2020 to July 2022



Source(s): VEC Analysis, [Statistics Canada](#)

Business numbers: active business increasing

Metro Vancouver businesses continue to bounce back from COVID-19. Opening businesses increased by 24% and closing businesses increased by 6.2% from February 2020 to July 2022 (the most recent month of data available).¹ Active businesses increased by 4,515 during the same period.² Wholesale trade, tourism and mining, quarrying, and oil and gas extraction continue to suffer, but in small terms relatively.

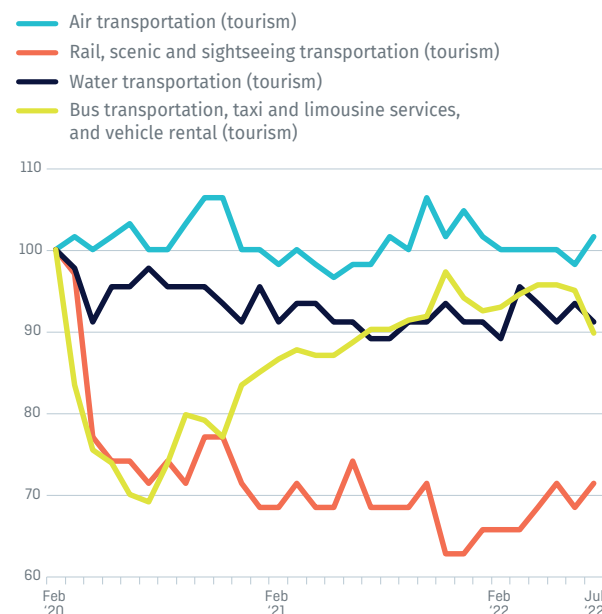
Tourism almost returns to near pre-pandemic levels

The tourism industry's business index declined to a low of 80 in May 2020, but returned to 100 in July 2022. Significant improvements were seen in the food and beverage services industry, where the index increased by 24 during the same period. Indexes in tourism-related transportation, such as water and bus transportation, taxi and limousine services, and vehicle rentals, were close to pre-pandemic levels and air transportation has surpassed its pre-pandemic levels.

Business counts in rail, scenic and sightseeing transportation (see the graph on the right) are still far behind pre-pandemic baselines. However, the lifting of Canadian border restrictions and back-to-normal traffic should help these sub-sectors make much-anticipated recoveries this year. Air traffic at YVR is now at 91.5% of pre-pandemic levels.

Metro Vancouver Business Indexes, Tourism Transportation

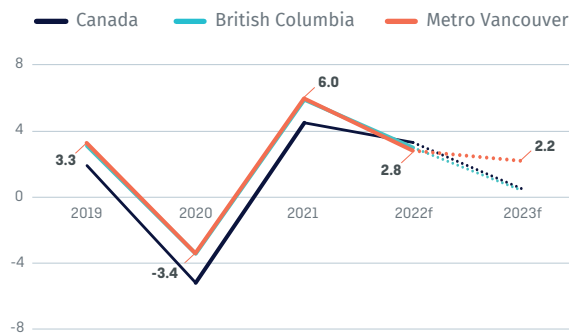
February 2020 = 100



Source(s): VEC Analysis, [Statistics Canada](#)

¹ defined as businesses that transition from having no employees in the previous month to having at least one employee in the current month
² those businesses that reported having one or more employees in a given month

Real GDP* Growth Rate Forecast



*: Chained (2012) dollars, (%) | f: forecast

Source(s): [The Conference Board of Canada](#), [RBC Economics](#), [World Bank](#)

GDP: set to decline due to economic pressures

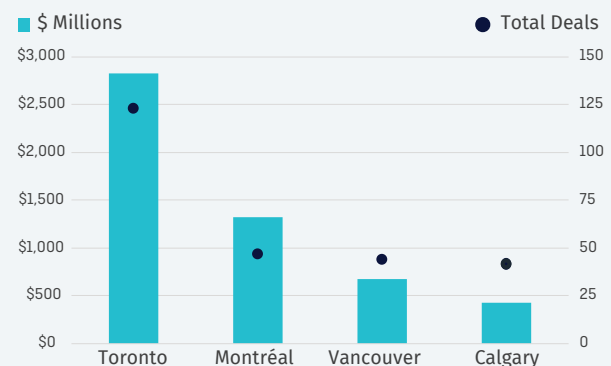
Metro Vancouver's real GDP surpassed pre-pandemic levels by the close of 2021 and is forecasted to hit \$159,895 million in 2022 (2.8% annual growth). However, the provincial real GDP is expected to downgrade with accumulated interest rate pressure.

British Columbia's household debt is the highest in the country relative to disposable income, and we saw the steepest declines in household net worth arising from recent housing price declines.

Venture capital: investment slows down

Despite the eight mega-deals (CA\$50 million and up) that closed in Q2 2022, a total of 182 disclosed investment deals (\$1.65 billion) across Canada marked the second quarter of 2022 the lowest quarter since before the pandemic. Vancouver saw 44 deals representing \$677 million in investment in the first half of 2022, enough to remain third behind Toronto and Montréal. Of this, only one company from BC was listed in Canada's largest 10 deals in first half of 2022 – LayerZero Labs (CA\$168 million, early stage). Victoria-based company Certn closed the province's largest deal (CA\$65 million from Inovia Capital and other investors) in Q2 2022.

Top Venture Capital Deals Q1/Q2 2022



Source(s): [Venture Capital Canadian Market Overview H1 2022, CVCA](#)

BC's most notable deal in Q2 of 2022



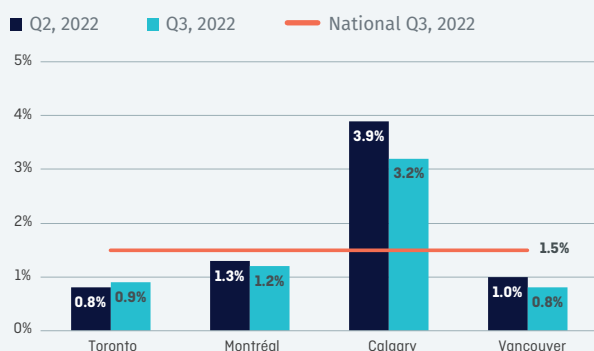
Total Raised:
CAD\$65 million

About Certn

Certn is a tech-enabled background check service that delivers a plethora of background checks within a matter of minutes. Certn provides domestic and international criminal background checks, credit reports, reference checks, education verification, driving record checks, identity verification, and more. Utilizing smart technology, Certn is able to generate comprehensive reports with data from over 200,000 sources and more than 150 countries.

Industrial land: availability at new record low in Metro Vancouver

Industrial Availability Rate



Source(s): VEC Analysis; **Canada Industrial Figures**, CBRE

According to CBRE, industrial availability in Metro Vancouver dropped to a record low of 0.8% in Q3 2022, with Vancouver vacancies hovering at 0.2%. Even though Vancouver no longer has the lowest vacancy rate in the country, the average asking lease rate jumped to a new high of \$20.67 per square foot (up 9.2% quarter-over-quarter) and remains the highest in Canada. Despite the quarter's new supply of 500,000 square feet added to the market, strong demand for industrial lands from manufacturing and distribution sectors will likely drive down the availability rate even further and lift rents to new record highs.

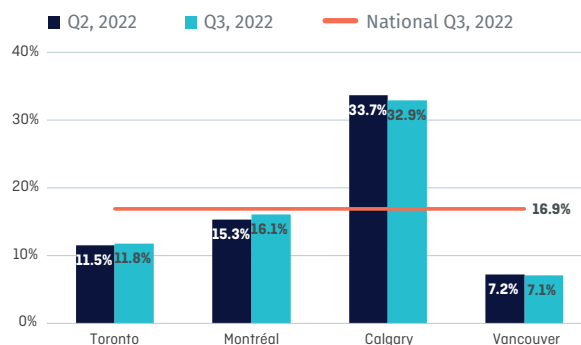
Looking for more data?

Refer to our online **Economic Snapshot** for the latest data sets, rankings and economic metrics.

[Go to Snapshot](#)

Office vacancy: rates remain lowest in Canada

Downtown Office Vacancy Rate



Source(s): VEC Analysis; **Canada Office Figures**, CBRE

According to CBRE, the office vacancy rate in downtown Vancouver decreased to 7.1% in Q3 2022 (down from 7.2% in Q2 2022) while the overall vacancy rate in Metro Vancouver increased to 6.6%, with most leasing demand coming from tech companies. Net absorption within Metro Vancouver for the first time dropped to below zero since the beginning of the pandemic, meaning more space was vacated than occupied. Of the 2.9 million square feet under construction in downtown Vancouver, 83.8% is pre-leased. The city is also set to maintain its position as the tightest major downtown office market in North America.

beyond GDP Metrics



In addition to important economic indicators, such as GDP, employment and total business counts, each issue of the economy report curates the best of VEC's research into other indicators and metrics that are traditionally overlooked but help provide a more holistic view of economic health and prosperity.

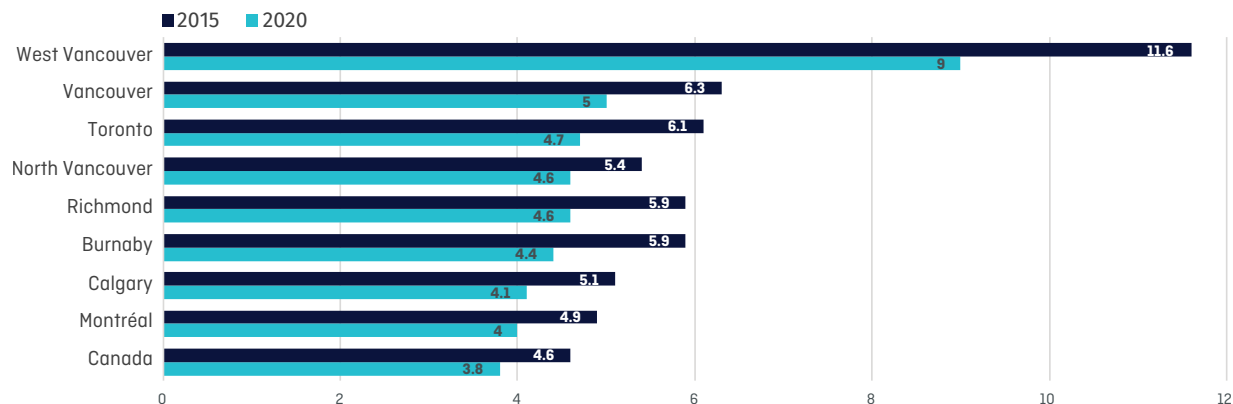
In this edition, we look at three important metrics: **income inequality**, **food insecurity** and **post-secondary education attainment**.

Income inequality:

How equal are our cities in Metro Vancouver vs Canada?

Income Inequality by Selected Municipalities

P90/P10 ratio* on adjusted household after-tax income

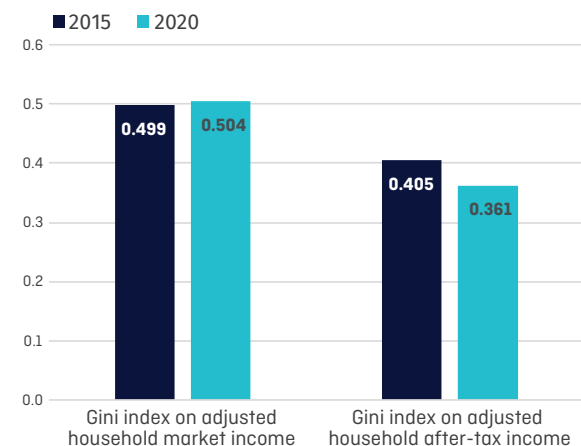


* How many times larger the 90th percentile income is compared to 10th percentile
Source(s): [Statistics Canada](#)

Despite income inequality falling across Canada from 2015 to 2020, significant divides remain in most municipalities. According to the latest Census data, the P90/P10 ratio (which compares the top 10% of household income earners to the bottom 10%) was 5.0 in the municipality of Vancouver and 9.0 in West Vancouver – much higher than national average of 3.8.

The Gini Coefficient – another common measurement for income inequality – shows that the Gini index for before-tax income remained approximately the same between 2015 and 2020 in Vancouver. However, there was a significant drop for after-tax income (0.405 to 0.361), which suggests that improvements in income inequality have stemmed from government measures like tax credits and transfers.

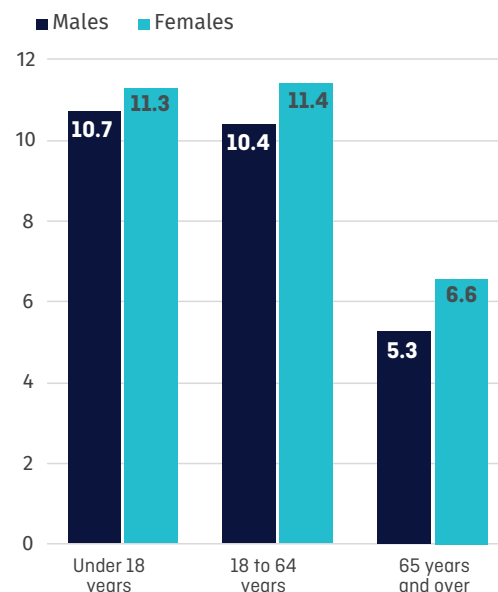
Gini Coefficient of Income**, Municipality of Vancouver



** Where 0 is perfect equality and 1 is perfect inequality
Source(s): [Statistics Canada](#)



Food Insecurity, Moderate or Severe British Columbia, 2020, (%)



Source(s): [Statistics Canada](#)

Food Insecurity: Have we done enough to prevent hunger?

According to the latest [Canadian Income Survey](#) conducted by Statistics Canada, annual data shows 10% of British Columbia residents were in moderate to severe levels of food insecurity in 2020 – the second lowest among all provinces in Canada, and down by 1.9 percentage points from 2019. This metric improved despite the global pandemic, while national food insecurity increased by 0.4 percentage points in the same period to 11.2%.

In British Columbia, females across all age groups reported a higher percentage of food insecurity than males. In 2020, 25.3% of people in female lone-parent families were unable to afford the food they needed (dropping by 12 percentage points from 2018). Among elderly couples, 3.2% reported food insecurity.

25.3%
of female lone-parent
families were unable to afford
the food they needed

British Columbia, 2020
Statistics Canada

How can we better prevent hunger?

According to Food Bank Canada's 2022 [HungerCount](#), 126 food banks in British Columbia reported 163,231 total visits (children made up 32% of visitors). Among all visitors to BC food banks, 24.1% received income from provincial disability support (second in the country after Ontario); 18.3% received income from social assistance; and only 18.5% received income from jobs. Food inflation, increasing shelter costs, and job loss were the main reasons people cited for accessing food banks, bringing to light key social policy challenges that need to be addressed.

Sources of income (%), visitors to BC food banks

Provincial disability support	24.1
Social assistance	18.3
Job income	18.5
Pension income	13.4
No income	11.4
Other income	7.9
Employment insurance (CRB, CRSB, CRCB)	4.0
Canada Child Benefit	1.5
Student loans/scholarships	0.9

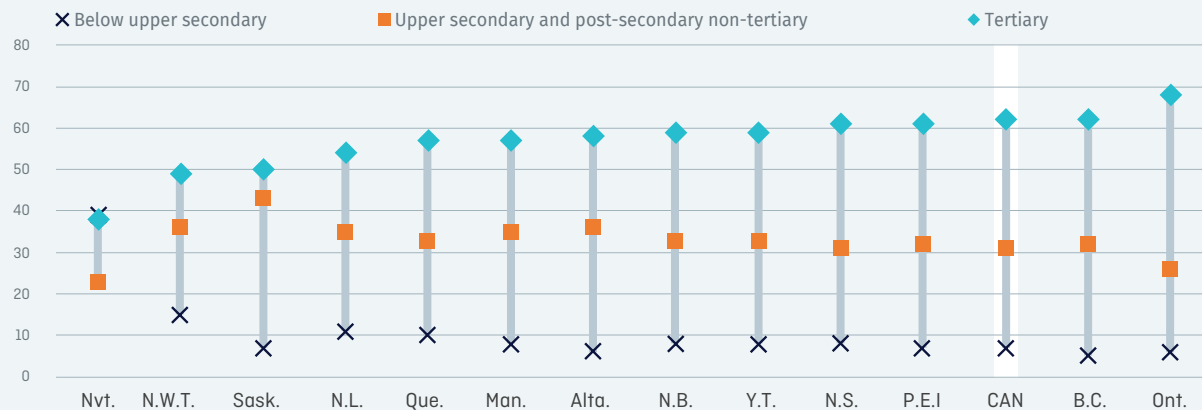
Source(s): [Food Banks Canada](#)

Education Attainment:

How has the pandemic affected education attainment?

Adult Education Level

Percentage of 25 to 64 years, 2021

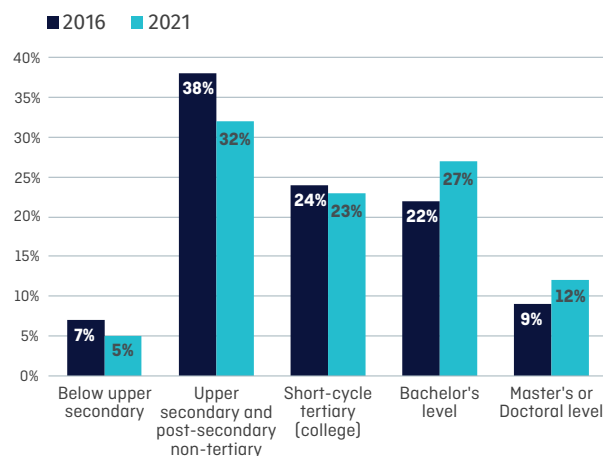


Source(s): Statistics Canada

The proportion of Canadians aged 25 to 64 who have a tertiary qualification (or post-secondary education) was 62% in 2021 – much higher than the average level of OECD countries at 40.6%. Between 2001 and 2021, British Columbia saw an increase of 14 percentage points in Bachelor's and +6 percentage points in Master's or Doctoral accreditation, representing the biggest gains across the country.

BC Highest Level of Education Attainment

25 to 64 years, (%)



Source(s): Statistics Canada

However, significant differences remain in levels of education among population groups. Over the past 20 years, young British Columbians aged 25 to 34 experienced a 24 percentage points increase in tertiary attainment – the highest growth in the country. While both sexes have experienced an increase in post-secondary attainment, it is more significant among women aged 25 to 64 years.

With a global recession likely on the horizon, classes shifting online, and increased financial pressures, young people are experiencing multiple impacts to their education brought upon by the pandemic. Additionally, the near-term economic uncertainty could lead to potential losses in earnings for recent graduates, although with job opportunities remaining high it is unclear how this will play out over the long term.

27%
of British Columbians
aged 25 to 64 have a
Bachelor's Degree
(highest level in Canada)

Statistics Canada, 2021



Film and Television

Physical production

Known worldwide for the quality of its crews, locations, and competitive production environment, Vancouver is the third-largest film and TV production centre in North America

Over the past 50 years, the film industry has become embedded in Vancouver's cultural fabric. Those who film in Vancouver benefit from the city's proximity to Los Angeles and the West Coast time zone, stable and competitive tax incentives and government support, and skilled talent and a connected community.

Aside from outstanding natural beauty and diverse urban and suburban locations, the region is also home to an array of world-class studios and soundstages, including the world's first B Corporation-certified film studio (Vancouver Film Studios) and the [world's largest LED stage \(Pixomondo/ Canadian Motion Picture Park\)](#). Vancouver's film industry is further distinguished by leaders pursuing carbon-neutral studio operations ([Vancouver Film Studios](#), [Martini Film Studios](#)), complemented by industry-wide initiatives such as the [Sustainable Production Forum](#), Creative BC's [Reel Green](#), and the City of Vancouver's ongoing work to provide access to clean power for sets.

Above all, Vancouver's global advantage lies in the deep experience of its crews – a skilled workforce recognized globally for its ability to deliver top-notch productions on time and on budget.

\$3.6B

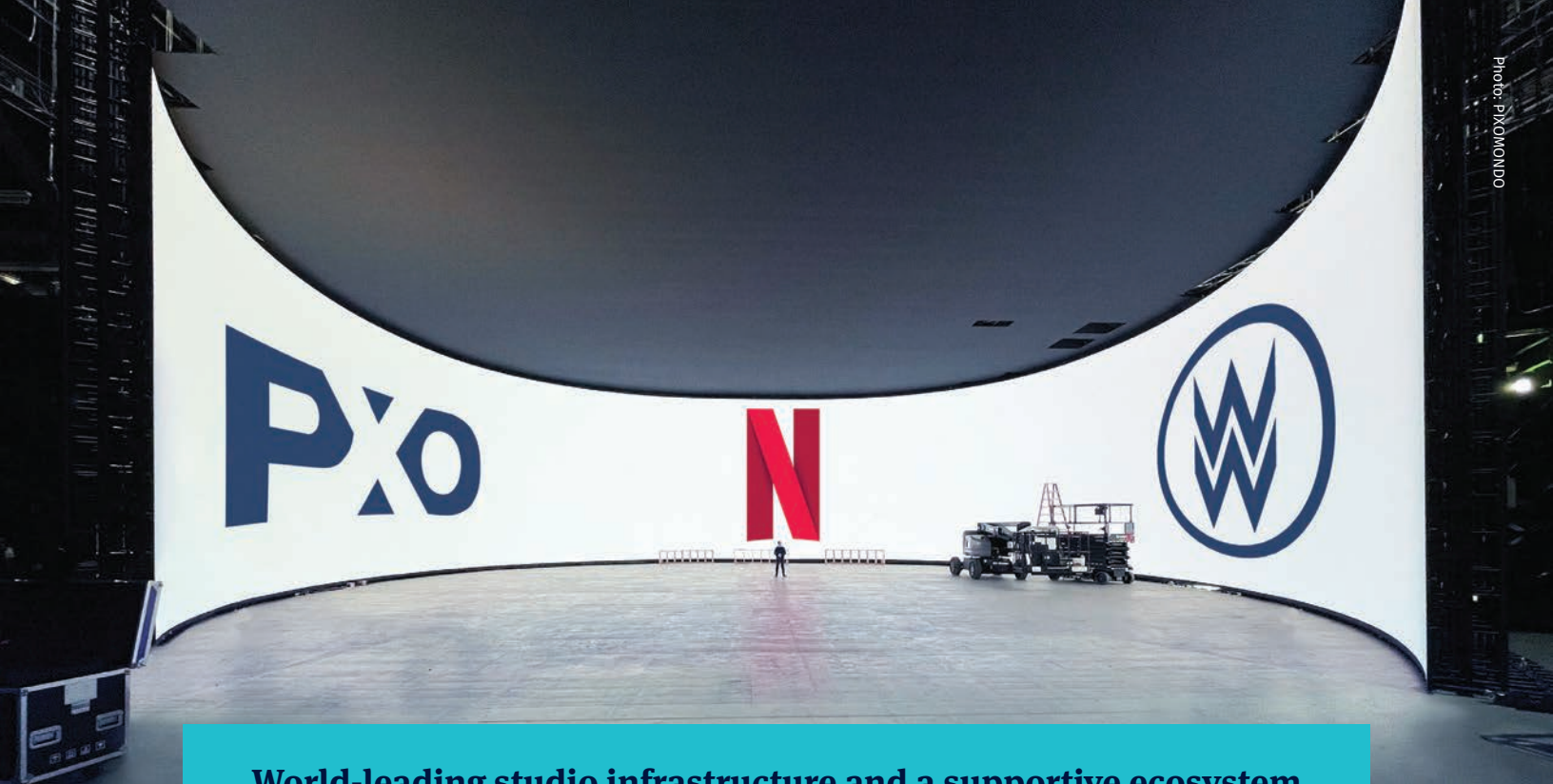
spent on physical production in 2021

#3

film hub in North America

13.9%

average annual growth rate since 2012



World-leading studio infrastructure and a supportive ecosystem

Vancouver is home to world-class film and television studios, including [Mammoth Studios](#), [Vancouver Film Studios](#), [North Shore Studios](#), [Ironwood Studios](#), [Canadian Motion Picture Park](#), [Eagle Creek Studios](#), [Bridge Studios](#), and [Martini Film Studios](#).

Almost every major studio operator in the region is currently building, or soon to be building, additional studio space, while new players are entering the market with significant investments. The Metro Vancouver region is expected to add as much as one million square feet of sound stages and production support space in the next three to five years, which would bring the total studio infrastructure footprint in the region to an estimated 3.5 to 4 million square feet.

The demand for film studios and infrastructure has also spurred visionary new developments with far-reaching implications for the cultural fabric of the region: the [Indigenous-led Willingdon Lands development project](#) – jointly owned and spearheaded by Musqueam Indian Band, Tsleil-Waututh Nation, and Aquilini Development – has plans for [450,000 sq ft of film and television studio production space](#), including a film academy. One of the site's objectives is to be a cultural and careers catalyst for Indigenous peoples to create and enhance the industry's opportunities with ways of knowing and their stories.

Vancouver's film industry draws success from the city's diverse educational institutions and training programs. [Simon Fraser University](#), [University of British Columbia](#), [Capilano University](#), [Emily Carr University of Art and Design](#) and [Vancouver Film School](#) offer respected filmmaking schools and programs, and [InFocus](#), [Blanche Macdonald Centre](#), [JC Institute](#), [VanArts](#) and numerous others provide technical training for hair, makeup and prosthetics, costume building, set design and manufacture, lighting and camera operations specific to the needs of the local film industry.

Underscoring this ecosystem is the leadership and advocacy of various industry associations and workers' unions. Most of the features and series shot in Vancouver are crewed by members of organizations like [IATSE Local 891](#), [IATSE Local 669](#) and the [Director's Guild of Canada – British Columbia \(DGC-BC\)](#). Associations like the [Motion Picture Production Industry Association of BC](#) (MPPIA BC) represent BC's production community broadly across the industry's subsectors and exemplify collaboration for the common good of the industry by representing workers, creatives, studios, distributors and financiers.

Industry growth and historic snapshot

Over the past decade, physical production spending has almost doubled, growing by an average of 13.9 percent over the past 10 years from \$1.3 billion in 2012 to \$3.6 billion in 2021.

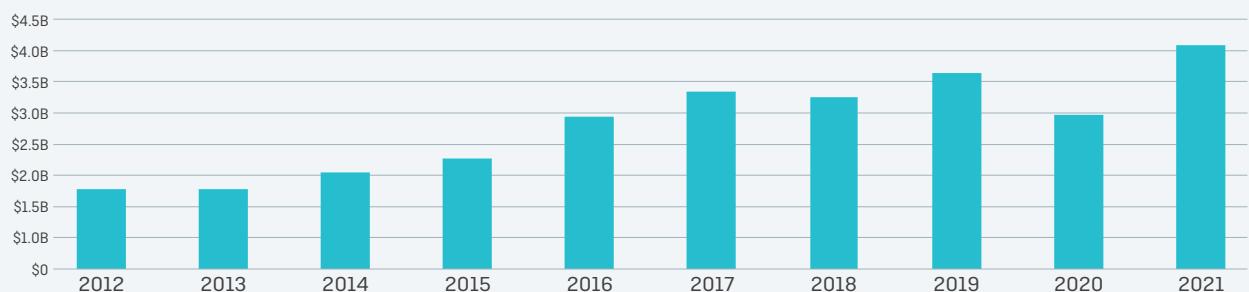
Vancouver's film industry has a strong balance of international and domestic production activity, with foreign projects accounting for three-quarters of total production dollars spent in BC. A significant portion of productions are episodic television series, which provide for longer-term projects, particularly those that are multi-year. These smooth out some of the more cyclical and shorter-term formats, such as feature films.

Film and television content tends to be in high demand even during economic downturns, and the industry's culture of agility is its own asset: during the pandemic, the sector was one of the fastest to recover; indeed, it experienced growth over pre-pandemic levels and provided employment to many workers from the live entertainment industry (concerts, festivals, etc.) that struggled to find work for almost two years.

The film industry is a crucial employer for Vancouver residents

- The film and television, post-production and animation industries have collectively invested \$30.9 billion in the provincial economy in the past decade.
- Physical production has accounted for \$23.1 billion of spending in the past decade, approximately half of which was paid directly to British Columbians as salaries and wages.
- According to Creative BC's most recent [Annual Impact Reports](#) (2018/19, 2019/20, 2020/21), BC's creative industries sector employs between 61,000–72,000 workers and supports approximately 35,000 full-time and equivalent jobs.
- Most production work is performed under high-paying union contracts where six-figure incomes are achievable without requiring high levels of post-secondary education.
- VEC estimates that more than 80% of provincial film production activity takes place in the Metro Vancouver region.

Total Spend of the BC Film & TV Industry
British Columbia, 2012 to 2021



Source(s): [Vancouver Economic Commission](#) / [WorkSafeBC](#), 2022

How can you get involved in the film industry?

1. Contact the various unions (IATSE Local 891, IATSE Local 669, Director's Guild of Canada – British Columbia) to learn about your options.
2. Check out [Creative Pathways](#) for resources and information about paths into #BCfilm.
3. Follow up with education providers and training programs. They have strong relationships with the industry through their alumni networks and instructor connections.

Examples of jobs and specializations:



Administration & Logistics

- Accounting and payroll
- Executive assistant
- Office coordinators
- Security
- Drivers
- Catering/hospitality
- Health & safety
- Human resources



Project and Crew Management

- Location management
- Assistant directors
- Production managers
- Line managers
- Transport coordinators
- Finance



Trades/Craft/Technicians

- Construction
- Hair/makeup artists
- Wardrobe design & management
- Electrician & lighting techs
- General labour
- Set decoration
- Camera operators

Government and policy support for the film industry

Creative BC administers British Columbia's globally competitive, recognized and stable tax relief system. These work in tandem with the Government of Canada's suite of tax reliefs to equip producers and filmmakers with strong incentives to hire BC and Canadian workers, crews, and services in the physical production industry.

PwC provides a comprehensive guide to [Canada's tax incentives](#) for film, video, digital media and animation projects. **Select tax relief programs include:**

- [British Columbia Production Services Tax Credit](#)
- [Film Incentive BC Tax Credit](#)
- [Canadian Film or Video Production Tax Credit](#)

The [City of Vancouver](#) offers comprehensive and supportive front-line service to filmmakers. Their staff are experienced in working with productions of all sizes to achieve the best creative looks in the city.

Six ways to help future-proof BC's production industry

1. Continue process improvements at municipal levels to help manage higher volumes of filming activity
2. Attract and train new workers to the labour force to accommodate industry's full growth potential
3. Facilitate and maintain community goodwill and support for the sector
4. Provide for and plan alternatives to account for loss of private open-air parking lots
5. Continue to coax industry transition from fossil fuel generators to clean energy options
6. Support locally based IP creation, retention and financing of Vancouver and Canadian content

Net-zero film production: an upwards trajectory

“The clean energy programs and infrastructure being developed by the City of Vancouver is part of a global trend to decarbonize the film industry. Local Vancouver studios, producers, crew members and vendors have been stepping up for decades to help deliver this critical transformation. We all recognize this work as being vital to the health of our planet and our communities as well as a strategic advantage in attracting employers and projects that share our values.”

Geoff Teoli
Vancouver Film Commissioner



Photo: Installation of a Clean Energy Kiosk in Downtown Vancouver, by Ingrid Valou

Diesel generators are the worldwide norm for powering film sets – their portability, variety and output capacity make them extremely convenient for remote locations and large sets. However, their use generates significant air and noise pollution. Replacing diesel generators in high-demand and urban film locations is a key tactic to help green one of the city’s most significant industries while reducing impacts to neighbourhoods that see a lot of film activity.

The City of Vancouver is a leading jurisdiction on sustainable film, and the first in Canada to offer discounts on permit fees based on clean energy use.

In 2018, the City of Vancouver installed a renewable energy power source at the Vancouver Art Gallery. Designed for the film industry’s use, it marked the first milestone in an initiative to create a city-wide clean power network supporting the film industry’s transition away from diesel generators and facilitate a more sustainable film industry. Three second-generation power kiosks are in the process of being installed. This initiative is entirely funded from the permit fees the industry pays to film in Vancouver.

Moreover, international suppliers with a significant Vancouver footprint – like William F. White International and MBS Equipment Co. Canada – are investing in their own solutions to replace diesel generators in their rental fleets.

Energy is only one dimension of the sustainability trend in film. Vancouver is full of service providers and vendors that help productions with anything from decarbonization strategies, waste hauling (with specific attention to diversion and reuse, repair and recycling), fully electric transport fleets, food diversion (from set catering) and carbon offsetting. This is in direct service to industry financiers and content providers – such as like Netflix, NBC Universal, Sony Pictures, and BBC Studios – all of whom have made commitments to carbon neutrality, net zero or other environmental stewardship practices.

Source(s): [Entertainment Partners](#), [City of Vancouver](#), [Variety](#)

Photo: Film set in Vancouver's Chinatown by Ingrid Valou

Companies leading the charge



Portable Electric

Vancouver-based manufacturer and global distributor of the VoltStack and other portable battery solutions for film industry and other industrial and live event sectors

portable-electric.com

Keep it Green Recycling

A Port Coquitlam-based recycling and materials reuse provider that services the film industry with zero-waste programs

keepitgreenrecycling.ca

Diversion Zero Waste

Vancouver's first film-only waste diversion and deconstruction company specializing in reducing set waste

diversionzerowaste.com/zero-waste-program

Green Spark Group

A leading green film consulting firm that runs the annual Sustainable Production Forum and helps sets, producers and studios with operational strategies and tactics for decarbonization and waste management

greensparkgroup.com

Valid Manufacturing

Salmon Arm-based manufacturer of industrial electrical equipment. Builds Vancouver's stand-alone clean film power kiosks as well as portable battery solutions for film and events sectors

validmfg.com



Vancouver Film Studios

The largest and most established film studio facility in the city of Vancouver, it is the world's first and only B-Corp-certified film studio and has been carbon-neutral since 2008

vancouverfilmstudios.com

Martini Film Studios (MFS)

In addition to its significant sustainability pledges, MFS is the first film studio in BC to commit to using renewable natural gas, a carbon-neutral heating source

martinifilmstudios.com



Circular Economy of Food

We must change the way we think about food

According to Second Harvest, 58% of all food produced in Canada is lost or wasted each year, while one in eight Canadian households – and one in nine Vancouver households – experience some level of food insecurity.

However, the dominant solution relies on grocery stores, restaurants, and consumers making donations to food banks of food that is unsellable or undesirable. This “solution” fails to address a key issue: relying on donations to address food insecurity in turn requires excess food to be generated across the food growing, processing, distribution and post-sale continuum that would otherwise go to waste. Also, relying on donated surplus food means food banks cannot guarantee they will meet the nutritional needs, cultural appropriateness, or dignity of food-insecure households.

There are ongoing efforts to eliminate food going to landfill and alleviate global hunger. These efforts are occurring on both a micro level (community) and a macro level (international aid and relief).

Related sectors and specializations:

- Waste management
- Logistics
- Agritech/ agriculture
- Urban agriculture
- Food science
- Land and food systems
- Local food
- Food safety
- Biochemistry

42,000+
tonnes of food waste
diverted annually
in Metro Vancouver
(2018)

10,400+
green jobs for local
food and material
management in
Vancouver

4%
surplus is edible
food rescued and
redistributed
(Second Harvest)



The circular economy of food in Vancouver

Many Vancouver organizations are working to address household hunger and food instability while also reducing food going to landfill. Simultaneously, organizations like [Sole Food Farms](#) and [Vancouver Urban Food Forest Foundation](#) work in tandem with local businesses and solutions providers to transition from the status quo – where alleviating hunger depends on a state of excess production – to a right-to-food framework that values food as something more than a commodity.

Circular food systems support local, regenerative agriculture and make the most of the food we

have. One way this happens is by ensuring that waste does not exist – that all byproducts or surplus become feedstock for another cycle.

Circular tactics are evident across all food industry verticals, including agriculture ([Trendi](#)) and processing ([Goodly Foods](#)), salvage and recovery ([West Coast Reduction](#), [Susgrainable](#)), data management ([FoodMesh](#)), packaging and zero-waste grocery stores ([Sharewares](#), [Nada](#)), and materials science and biochemistry ([Regenerative Waste Labs](#)). They also already exist in many consumer behaviours.



Five ways people are practicing food circularity (and where to learn more)

1. Smart food storage (learn food storage tips from [Love Food Hate Waste](#))
2. Mindful food purchasing (buy only what you can consume)
3. Producer-to-consumer sales (farmer's markets, community-supported agriculture)
4. Food-last-minute apps ([Too Good to Go](#), [Flashfood](#), [FoodHero](#))
5. Food rescue and redistribution (see guidelines for [industry food donation](#) & [food distribution organizations](#))



Food should never equal waste

How does food loss differ from food waste?

Food loss refers to food lost from harvest up to, but not including, retail. **Food waste** refers to waste that occurs during and beyond the retail stage. Food is wasted during these stages for numerous reasons, including:

Cosmetic

food is discarded because it is not seen as meeting retail-consumer aesthetic standards

Health

food has been contaminated or somehow exposed to conditions that risk its certifiable freshness

Bureaucratic guidelines

stringent guidelines, such as on transportation handling or sourcing, can pose barriers to otherwise edible foods being sold or used at the retail or recovery stages

Logistics

delays in transportation and/or complications in long-term storage

The carbon footprint of wasted food

It is estimated that as much as 8–10 percent of global GHG emissions are produced as a result of wasted food. In Canada alone, wasted food accounts for an annual **56.6 million tonnes** of CO₂-equivalent emissions.

According to Second Harvest, almost **one-third of food wasted in Canada could have been redirected to people in need.**

However, a follow-up report shows that **only 4% of surplus edible food is diverted to donation sites.**

8–10%
of global GHG emissions
are produced as result
of wasted food

Sources: Second Harvest

Local Leaders in Food Recovery

Other common trends and opportunities in the circular food space include urban farming – in part to maximize food yield and resilience in densely populated centres (as with [QuantoTech Solutions](#)) – and the need for better data to improve logistics or apply reverse logistics to the supply chain (as exemplified by [FoodMesh](#)).

Food recovery (for consumption)

Food recovery includes diversion of food within food production systems that process and/or refine inedible foods unacceptable for consumption by any organism into fuels.

Goodly Foods

makes food using surplus produce that would have otherwise gone to waste, while creating accessible living-wage jobs in the process
[goodly.ca](#)

Trendi

uses robotics to help the farm and food industry rescue and upcycle food waste into convenient and healthy food products
[trendi.com](#)

Susgrainable

creates upcycled baking mixes and barley flour from leftover spent grain used in the making of beer at local breweries
[susgrainable.com](#)

Nutrient recovery (not for consumption)

Nutrient recovery refers to diversion practices applied to food or organic material that is no longer edible by people or animals, but which still holds nutritional value as feedstocks for agricultural purposes.

ReFeed

a Langley-based centre of excellence and innovation in food waste recovery, transforms unused food and food industry waste into nutrition for people, livestock, and the soil
[refeedcanada.com](#)

West Coast Reduction

provides safe, environmentally friendly recycling solutions for farms, feedlots, restaurants, butcher shops and supermarkets with by-products that have nowhere to go
[wcrl.com](#)

Terraforma Systems

designs and develops an odor-free, closed-loop, on-site food composter machine to help organizations streamline and simplify value recovery
[terraformasystems.com/composters](#)

Takachar

is on a mission to fight climate change by transforming agricultural and forestry waste biomass into marketable products around the world, such as solid fuel, fertilizer, and other specialty chemicals
[takachar.com](#)



Support for adopting a circular economy in the food system

Funding and other forms of support for organizations, communities, and businesses to adopt just circular economy practices can be found in many different focus areas, all of which touch the food system in certain ways, but none of which comprehensively manage the entire food system.

Those seeking support for a circular economy business may find search terms related to business innovation, growth, and cluster development more relevant than search terms including circular, organics, food processing, farmgate, agriculture, agritech, food safety, and zero waste.

- The Province of British Columbia now allows vertical farming operations on areas zoned ALR (Agricultural Land Reserve). This has the potential to significantly increase per-square-foot food yield in the ALR.
- The Food Waste Reduction Challenge is a recent \$20 million initiative of the federal government that invests in technologies and business models that help to reduce food waste.
- The Circular Food Innovation Lab is a facilitated lab approach for food sector businesses to identify and experiment with potential solutions to food waste; it's supported by the City of Vancouver, Mitacs, and ECUAD and VEC.
- Love Food Hate Waste is a public campaign with tips and tricks for reducing wasted food in homes.
- A classic example of not-for-profit food recovery and redistribution is Canada's Food Banks; however, more organizations are emerging to fill the gap, including recovery of food that might not go to national food banks. FoodStash, Vancouver Food Runners and other not-for-profits are also entering the food processing and retail market space using recovered food to make products.

Three barriers to establishing a just circular economy of food

1. Deeply entrenched food production, consumption and waste practices, and expectations about household hunger.
2. Lack of connectivity and communication between actors in the food system.
3. Systemic undervaluing of food and food sector employment. Employment in the food sector – particularly at the manufacturing stage – can be tenuous and insecure.

Further Reading and Resources



A Guide to a Just Circular Economy of Food in Vancouver

Vancouver Economic Commission
(Economic Transformation Lab), 2021

[Read the report](#)

- [Scaling Circular Food Systems in Canada](#)
National Zero Waste Council, 2022
- [Local Food System Action Plan Update](#)
City of Vancouver Park Board, 2021
- [Future-proofing Vancouver: Food Security beyond Food Surplus](#) (event, Nov. 23, 2022)
Vancouver Economic Commission
- [Agritech Resources](#)
Invest Vancouver, 2022
- [The Avoidable Crisis of Food Waste](#)
Second Harvest
- [Wasted Opportunity](#)
Second Harvest

Traditional Economics Explained

Poverty

“Any increase to the minimum wage is good, but there is still that significant gap between the minimum wage and the living wage... We know that the majority of families that are living in poverty in B.C. and across Canada are working, and they’re working really, really hard to try and make ends meet.”

Anastasia French, [Living Wage for Families BC](#)

What is poverty?

Poverty refers to not having enough money to afford the necessities of life. According to [Statistics Canada](#), Canadians are considered as living in poverty if their household income falls below the Canadian Official Poverty Line. This is based on the Market Basket Measure, which is a calculation for the basic standard of living cost for the “reference family” based on essential expenses, including food, clothing, footwear, transportation and shelter.

As Canada’s official source of poverty statistics, the Canadian Income Survey provides results

to estimate the poverty line. However, some experts have suggested the annual survey does not fully capture experience of marginalized groups, who are more likely to experience poverty due to systemic issues, including racial, gender and ability-based discrimination. This has been addressed by Canada’s First Poverty Reduction Strategy released in 2018 – a whole-of-government strategy that improves the measurement of poverty by including more details of specific groups from Census.

How to measure poverty

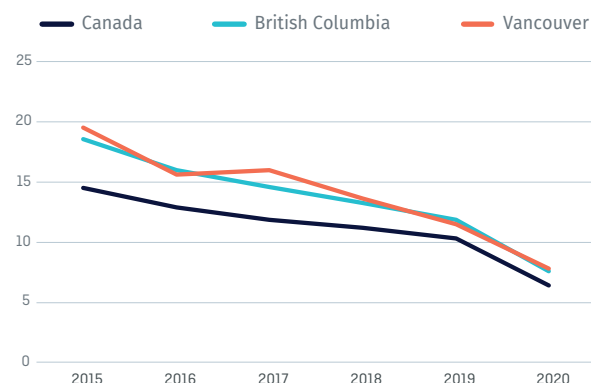
In 2020, the last year of data available, Vancouver held the highest MBM threshold in the country at \$50,569, followed by Calgary (\$50,223), Toronto (\$49,727) and Edmonton (\$49,723). Most of the regional variation in the MBM thresholds in Canada come from differences in shelter costs.

Market Basket Measure (MBM) thresholds in 2020 as expressed in constant dollars for the reference family (two adults and two children) for Metro Vancouver:

Total Poverty Line Threshold	=	Food Nutritious food	+	Clothing Clothing and footwear	+	Transportation	+	Shelter Rent, electricity, heat, clean water	+	Other Personal care, phone, reading, recreation, entertainment, school supplies
\$4,214 / month	=	\$1,035	+	\$174	+	\$381	+	\$1,643	+	\$981
\$50,569 / year	=	\$12,418	+	\$2,086	+	\$4,573	+	\$19,720	+	\$11,772

Individuals Living in Poverty (%)

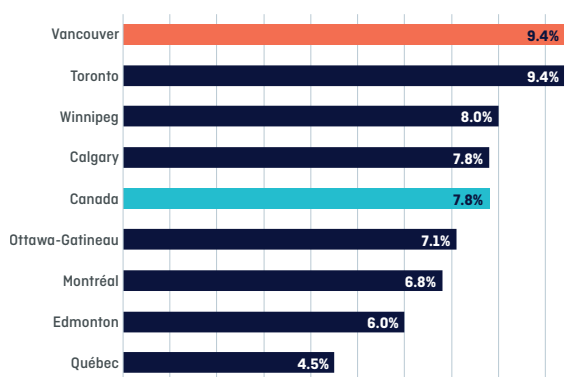
Based on the Market Basket Measure, 2018 Base



Source(s): [Statistics Canada](#)

2020 Poverty Rate, Working Age Adults 18-64 Years

% of population, Market Basket Measure, 2018 Base



Source(s): [Statistics Canada](#)

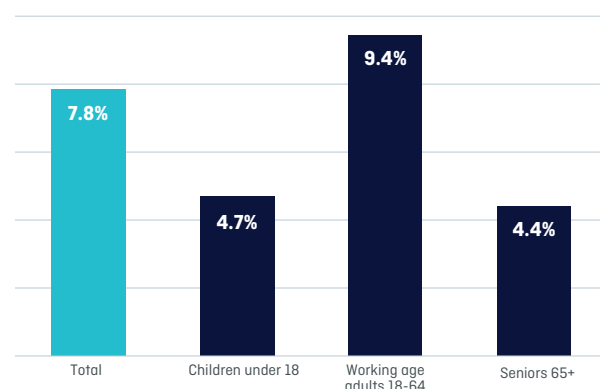
Poverty in Metro Vancouver

The percentage of Metro Vancouver residents living in poverty was 7.8% in 2020, down by 11.7 percentage points from 2015. Despite improvement over the past few years, the percentages of people living in poverty in Metro Vancouver and the Greater Toronto Area remain the highest in Canada.

In Metro Vancouver, the poverty rates were not much different between females and males, while there was a significant difference between ages groups. In 2020, 9.4% working age adults (18-64 years) were living in poverty – double the percentage for children under 18 years and seniors 65 years and over.

Poverty Rates (%), Metro Vancouver

2020, by age groups, based on MBM 2018



Source(s): [Statistics Canada](#)

Freedom from poverty as a human right

The rights to an adequate standard of living include food, clothing, housing and medical care and necessary social services. The milestone “[Universal Declaration of Human Rights \(UDHR\)](#)” enshrined these rights as universal in 1948. However, the progress of reducing poverty has been slow, and the pandemic reversed much of the gains made in recent years, and the world is unlikely to achieve the [Sustainable Development Goals](#) of eliminating extreme poverty by 2030.

This could be due in part to a disagreement by [economists](#) about the perceived state of extreme poverty prior to the 20th century. Some economists argue that tracking any progress on ending extreme poverty – currently defined as living on less than US\$1.90 per day – is flawed. Moreover, efforts to end poverty must be tailored to their specific local contexts.

In a relatively wealthy country like Canada, [poverty reduction strategies](#) argue that community-level efforts are best directed towards access to affordable housing, clean water, opportunity and dignity, and protecting people who experience poverty, homelessness and discrimination. In recent years, increasing attention has been given to the specific disenfranchisement of First Nations and other groups experiencing a higher rate of poverty due to colonial factors. Solutions gaining traction include economic reconciliation and land back initiatives, along with the City of Vancouver’s recent approval of an [UNDRIP strategy](#).

A person in blue scrubs is pushing a medical cart down a long, brightly lit hospital hallway. The cart is loaded with various medical supplies, including a red container, a blue container, and a large black bag. The hallway has a polished floor and glass railings on the left side.

7.6%

of Canadians between
18 and 64 years belong
to the working poor

The working poor

Working poor is a term used to describe individuals and families who maintain regular employment but remain in relative poverty due to low levels of pay and dependent expenses, and it is both a growing local and global phenomenon. According to Statistics Canada, 7.6 percent of Canadians between 18 and 64 years are categorized as belonging to the working poor; the International Labour Organization (ILO) estimates the global number to be 21 percent.

One of the hurdles of eliminating poverty is the perception that stable jobs are enough to guarantee that a worker would not fall into poverty. However, this perception is far from reality due to the continually rising cost of living in every jurisdiction and ongoing legacies of dispossession, colonization, and even globalization, which have worked in tandem to deprive entire cultures or populations from access to opportunities or practices of self-subsistence.

For a time, minimum wage standards were enough to ensure a household could live comfortably; these days, living wages may be more necessary and have been gaining traction.

Refer to the [Spring 2022 issue](#) for a deeper dive into minimum and living wages.

Further Reading and Resources

- [Dimensions of Poverty Hub](#)
Statistics Canada
- [Understanding Canada's New Poverty Line: The Market Basket Measure](#)
Statistics Canada
- [Inequalities in working poor Canadians](#)
Statistics Canada
- [Healthy City Dashboard: Low-income individuals](#)
City of Vancouver
- [UHCHR and the Human Rights Dimension of Poverty](#)
UN Human Rights
- [Extreme poverty isn't natural, it's created](#)
Jason Hickel
- [The working poor – or how a job is no guarantee of decent living conditions](#)
International Labour Organization

Doughnut Economics

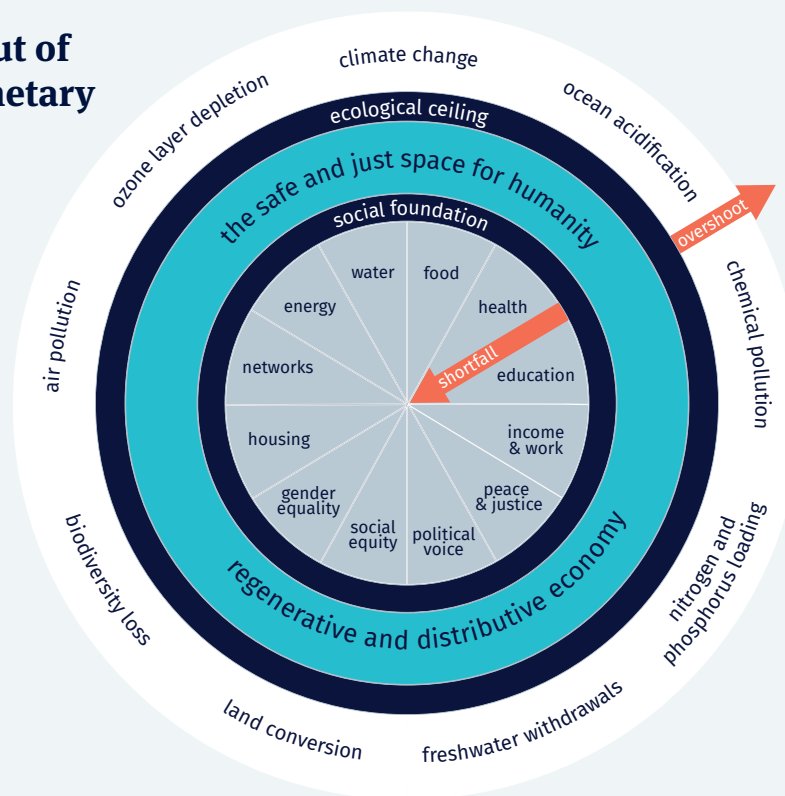
What is doughnut economics?

The doughnut is a visualization of an economic model described by Kate Raworth in the 2012 publication “A Safe and Just Space for Humanity: Can we live within the doughnut?” It is described in more detail in her 2017 book “[Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist](#).”

Doughnut economics aims to recalibrate the way people think about economics from the ground with the goal of “fully [meeting] the needs of all within the means of the planet.” The doughnut itself is a visual representation of this mission: it is expressed as one circle (humanity’s social foundation) – drawn and centred within a larger circle (the planet’s ecological ceiling).

The doughnut of social & planetary boundaries

Credit:
[Kate Raworth](#)



What are the planetary boundaries?

The planetary boundaries comprising the ecological ceiling are laid out by [Rockstrom et al.](#), who refer to the area within them as the “safe operating space for humanity.” Exceeding these boundaries will trigger unacceptable environmental degradation and irreversible tipping points in Earth systems.

What comprises the social foundation?

The twelve dimensions of the social foundation referred to by Kate Raworth are derived from internationally agreed minimum social standards, as identified by the world’s governments in the Sustainable Development Goals in 2015.

Sources: [Kate Raworth](#), [Global Policy Journal](#), [The Alternative](#)

Why is *doughnut* *economics* important?

Doughnut economics is important because – put in conventional business language – we as a species are overspending on our budget (planetary resources) and under-delivering on even a minimally acceptable product (a just social foundation for all).

As the doughnut was primarily conceived for action from the planetary to national or city levels, it is not the most actionable model for actors at smaller scales, such as individual businesses. However, DEAL has created a **doughnut design for business toolkit** to maximise business impact.

“Doughnut Economics recognises that growth may be a healthy phase of life, but nothing grows forever: things that succeed do so by growing until it is time to grow up and thrive instead.”

Source: Doughnut Economics Action Lab (DEAL)

Shifting from divisive and degenerative to regenerative and distributive

A fundamental facet of doughnut design as spearheaded by the Doughnut Economics Action Lab (DEAL) is the imperative for principles of regeneration or distribution.

Distributive enterprises feature open-source product design and business operations to enable collaborative innovation and open-source economic and business development.

Regenerative businesses have a central mission to improve the world around them by creating or returning more value in service to society, environment and the global economy than it extracts.

Further Reading

- [Meet the Doughnut and the concepts at the heart of doughnut economics](#)
Doughnut Economics Action Lab
- [Reversing the Freight Train](#)
London Review of Books
- [Doughnut Economics: Seven Ways to think like a 21st-Century Economist](#)
Kate Raworth

Five layers of organizational (re)design for businesses

DEAL has put together a doughnut economics toolkit for businesses that uses systems thinking and deep design principles to shift and transform the way we think about some of the fundamental elements that make up businesses.

The toolkit provides guiding questions for discussion, problem-solving and redesign for each of the following pillars:

Purpose

If you were to write a desired purpose from a Doughnut rather than financial perspective, what would it be?

Networks

How will your business achieve long-term committed partnerships with suppliers and other commercial partners?

Governance

How does your governance (e.g. board) navigate trade-offs between ecological, social and financial goals?

Ownership

What expectations do owners have on the ecological, social and financial performance of the business?

Finance

Should margins adapt to enable bold ideas? What is a fair return for investors and how can exits (if needed) be managed to retain [regenerative, distributed] purpose?

[Watch the recap by DEAL on Doughnut Economics for Business and access their toolkit](#)

From Kate Raworth's Doughnut Economics:

Seven ways to think like a 21st century economist

Seven ways to think	From 20 th economics to 21 st century economics	Local examples
1. Change the goal	GDP Growth → The Doughnut	Sole Food demonstrates the vital connections between farming, land stewardship, and community well-being.
2. See the big picture	Self-contained market → Embedded economy	Vancity is a values-based financial co-op that leverages its assets to improve the financial wellbeing of its members and communities
3. Nurture human nature	Rational economic man → Social adaptable humans	Embers creates employment and economic opportunities for people living on low incomes
4. Get savvy with systems	Mechanical equilibrium → Dynamic complexity	Terramera is on a mission leverages machine learning, nature-based solutions and regenerative agriculture to achieve climate action and food security at a global scale.
5. Design to distribute	Growth will even it up again → Distributive by design	ChopValue uses a franchising business model to expand its circular economy impact.
6. Create to regenerate	Growth will clean it up again → Regenerative by design	Aisle makes reusable menstrual care products from textiles diverted from landfill.
7. Be agnostic about growth	Growth addicted → Growth agnostic	Modo is a car co-op on a mission to advance the car-share movement and has made its proprietary booking software to others around the world.



Photos:
Collected from local restaurants and produced in local, distributed microfactories, ChopValue recycles chopsticks (left) into high-performance office furniture, home decor, kitchen accessories and games (right). Captured by Ingrid Valou.

VEC Highlights

PROGRAM

Angels for Climate Solutions

This 16-week education and training program is designed to increase the flow of capital investment into climate-tech startups. The program has two intersecting cohort streams: one geared towards angel investors looking to make early-stage investments, and one designed for climate-focused startups looking to fundraise. Angel investors will navigate the ins and outs of early-stage investing while startups prepare for the capital-raising process. At the end of the program, the angel investor cohort will award a \$100,000+ investment to the winning startup.

Deadlines: Startups: November 28th, 2022 & Investors: December 16th, 2022 | [Apply Now](#)

EVENT

Future-proofing Vancouver: Food security beyond food surplus

The latest in our Future-proofing Vancouver event series will examine the ways in which our food system diverts surplus food to address food insecurity and propose longer-term solutions that support a just circular economy of food. Topics covered in this three-part panel discussion: our society's reliance on overproduction of food; experiences caring for the needs of community and industry; and ways to collectively navigate the transition to a circular economy of food.

November 23rd, 2022 | 11:00AM – 2:00PM | [Register Now](#)

PROGRAM

Tech Bootcamp

The Vancouver Economic Commission (VEC) and [Immigrant Employment Council of BC](#) (IEC-BC) are inviting [technology employers to provide feedback](#) to a survey that will help shape a series of bootcamps focused on “soft skills” for newcomers to Canada. These bootcamps are designed to be a learning experience for both newcomers and tech employers, with an emphasis on acknowledgement and appreciation of cultural diversity. educators, entrepreneurs, visionaries, artists, planners and activists that are making an impact in their respective fields – and beyond – but who may still be less-known in the economic development ecosystem.

Deadline: November 28th, 2022 | [Submit Now](#)

Additional Economic Development Reports and Resources

- [Quality of Life Hub](#)
Statistics Canada
- [Canadian VC & PE Market Overview Reports](#)
CVCA
- [Provincial Outlook – Sept 2022](#)
RBC Economics
- [Canadian Market Reports](#)
CBRE
- [Industry Outlook 2023](#)
EIU
- [McKinsey Technology Trends Outlook 2022](#)
McKinsey & Company
- [City of Vancouver's UNDRIP Strategy](#)
City of Vancouver
- [Water Safe Cities](#)
C40 Cities
- [Global Outlook on Financing for Sustainable development 2023](#)
OECD
- [Sustainable Cities Report Card](#)
Corporate Knights

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