

# INDUSTRIAL

# INSIGHTS

Vancouver  
2018



**VANCOUVER**  
ECONOMIC COMMISSION

# METHODOLOGY

## STEP 1: Identify Businesses



The Vancouver Economic Commission (VEC) conducted a survey of industrial businesses (as defined below) in the City of Vancouver. Industrial businesses were identified using Dun and Bradstreet's 2018 Business Database and the North American Industry Classification System (NAICS).<sup>1</sup> The VEC decided which codes to include based on its years of experience working with industry. In addition, all other businesses located in industrial and mixed employment districts were identified by cross referencing Dun and Bradstreet's Business data with postal codes that align with the City of Vancouver's industrial and mixed employment districts.<sup>2</sup>

A total of 4,181 businesses were identified. This data was filtered for businesses likely to have an industrial element, leading to a shortlist of 3,250 businesses.<sup>3</sup> Of these businesses, 1,892 were contacted to complete the survey. The completion rate was approximately 10 percent.

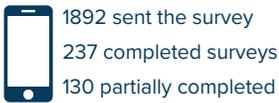
The survey sample compares favourably with data from Statistics Canada 2016 Census in terms of number of businesses in each sector (ie. proportion of manufacturing companies in sample reflects proportion of manufacturing companies in census) and employment numbers (ie. proportion of businesses with 1-4 employees in sample reflects proportion of businesses with 1-4 employees in census).

Survey data was augmented with 40 in-depth interviews with business owners, business improvement associations, industry associations, industrial developers, real estate brokers, landowners, academics and regulators. Additional third party research was consulted including publications from McKinsey and Company, the Urban Manufacturing Alliance, the Brookings Institute, local industrial real estate brokerages, and other levels of government.

## STEP 2: Filter for Industrial



## STEP 3: Locate Contacts + Send Survey



## STEP 4: Compare Data & Conduct Analysis



- Results compared to census data to ensure representative sample
- Interviews conducted to clarify answers and fill information gaps

1 Two-digit NAICS codes were used for businesses in Manufacturing, Wholesale Trade, and Construction, and select three-digit codes from Agriculture, Forestry & Mining, Transportation, Communications & Utilities; and Business & Personal Services.

2 Refer to Vancouver.ca for more information on industrial and mixed employment zones.

3 Businesses were evaluated based on business name, building type, and business description to filter out ones that are unlikely to have an industrial element or were not businesses (e.g. churches, social services, government administration offices)

## INDUSTRIAL BUSINESS DEFINITION

In this report, 'industrial business' is used to reference all businesses included in the filtered survey sample. This includes what might be called 'traditional' industrial businesses (e.g. those categorized in City of Vancouver's Business License Register as Production, Distribution and Repair businesses) as well as businesses in emerging sectors that have largely industrial characteristics, but are often misrepresented as primarily commercial or retail (e.g. cleantech, film). Individual business sectors have been called out where appropriate to differentiate between traditional industrial businesses, pseudo-industrial businesses, and those that are not industrial but are located in industrial areas.

## ABOUT THE VANCOUVER ECONOMIC COMMISSION

The Vancouver Economic Commission (VEC) works to position Vancouver as a global leader for innovative, creative and sustainable business. The VEC engages directly with entrepreneurs, investors, small and mid-size business owners, global enterprises and a wide range of community stakeholders, including elected officials, departments of all levels of government, industry associations and educational institutions to stay connected, informed and agile and to recognize trends and constraints in Vancouver's nation-leading economy.

## REPORT AUTHOR

**Pietra Basilij**, Manager, Industrial Initiatives with support from **Cascadia Partners & Mustel Group**

## WHY THIS RESEARCH?

The presence of industrial business in Vancouver is critical to the city's economic resilience and to inclusive economic development. Industrial businesses provide a diversity of employment opportunities, play an indispensable role in the supply chain of nearly every economic sector, and provide many of the services needed to keep a city functional, from waste management to food distribution.

**Despite the essential role industrial businesses play, mounting pressures are increasing the costs of doing business and threatening the viability of industrial operations in Vancouver.**

This report aims to provide an improved understanding about Vancouver's industrial operations and the forces acting upon them so that the community can make informed, data-driven decisions about how to best support this segment of the economy.

It aims to separate the myths about industrial operations (they are polluting, massive in scale and incompatible with other land uses) from the reality (the majority of Vancouver's industrial operations are clean, small-scale and contribute to the overall sustainability of the city). It aims to break down harmful misconceptions about where industrial businesses belong (in the past, in the suburbs, in other parts of the world) and demonstrate what we stand to lose if industrial businesses disappear from Vancouver's landscape (jobs, wages, employment diversity, affordable goods and services). And it aims to demonstrate why industrial space should be treated as a land use worth protecting and prioritizing in its own right rather than a bank of land to be siphoned off for housing, social services, and institutional uses.

Industrial operations are sometimes viewed by the public as a diminishing relic of the past. In fact, most of Vancouver's industrial businesses are less than 20 years old, born in response to an increasing population, new consumer demands and global export market opportunities. Industrial operations are continually changing and evolving as well. More than 50 percent of the businesses surveyed have been in their current spaces for less than six years and more than 65 percent anticipate expanding in the next two years.

**To maintain crucial industrial infrastructure, Vancouver needs modern industrial policies and land use practices, proactive infrastructure planning, and new investment in development tools.** The insights contained in this report can help guide these efforts.

### INSIGHT

More than half of Vancouver's industrial businesses are less than 20 years old, and two thirds are actively expanding.

## WHAT'S INSIDE?

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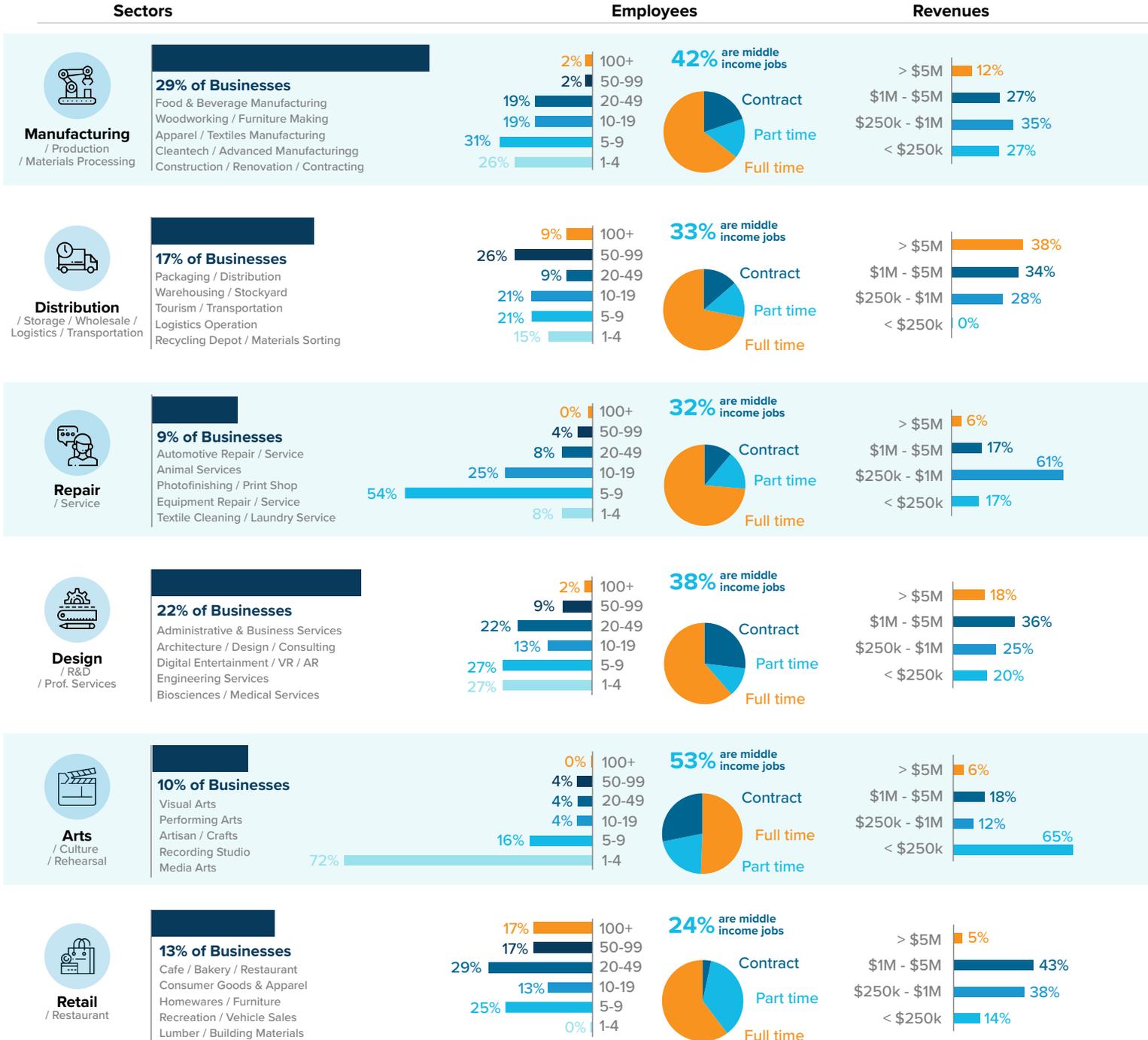
## PARTNERS



# INDUSTRY SNAPSHOT

## SURVEY RESPONDENTS BY SECTOR

Characteristics of Businesses in Vancouver's Industrial Districts



\*Arts and Culture has been separated out in the survey because this sector is treated differently in an urban planning context. Since artists are not found on many traditional business listings, additional efforts were made to reach this group. As a result, artists may be over-represented in the survey sample.

\*\*Middle income jobs were calculated as those above a living wage (approximately \$21/hr or \$43k/annum) and below a professional wage (approximately \$35/hr or \$73k/annum). Middle income employment opportunities are important for achieving a diverse, resilient economy.

**MYTH**

Nothing gets made here anymore.

**INSIGHT**

The manufacturing sector is Vancouver's most dominant industrial sector by quantity.

**MYTH**

Industrial businesses belong outside the city.

**INSIGHT**

Most industrial businesses in Vancouver primarily serve local clientele.

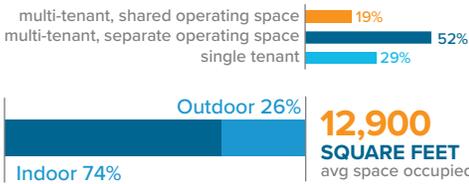
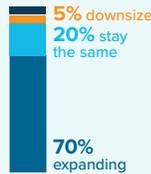
**Space**

**Operations**

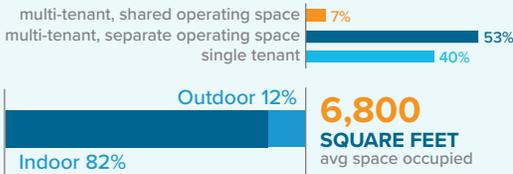
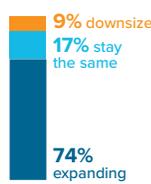
**Business Linkages**



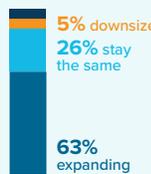
**20% OPERATE DAY & NIGHT**  
 Monday to Friday



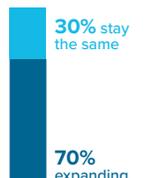
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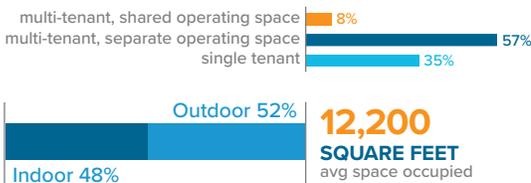
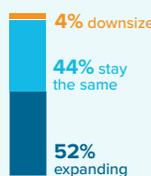
**30% OPERATE DAY & NIGHT**  
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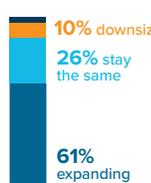
**2% OPERATE DAY & NIGHT**  
 Monday to Friday



**40% OPERATE DAY & NIGHT**  
 Monday to Friday



**36% OPERATE DAY & NIGHT**  
 Monday to Friday



\* Businesses in the film, food, and health sectors span multiple industrial sectors. For instance, some film companies self-identify as manufacturing and production and others self-identify as arts and culture businesses; food processors (manufacturing) are treated differently than food distributors (distribution); and some health companies identify as manufacturing (developing drug treatments and medical devices), distribution (medical device wholesaling), and service (medical device repair and servicing). Select businesses were recategorized in the analysis of the survey data (where it was clear that there was a better categorical fit based on their activities), but for the most part, businesses were categorized according to how they self-identify.

# MARKET TRENDS

## LOCAL MANUFACTURING RENAISSANCE

The demand for uniquely Vancouver goods is growing globally, increasing the demand for mixed use commercial-industrial space in Vancouver.

By 2025, global consumption is forecast to reach \$62 trillion - double what it was in 2013<sup>1</sup> - and Vancouver's prominent manufacturing subsectors are reflecting this surging demand.

### FOOD PROCESSING

The food processing sector in B.C., which now boasts 2,500 companies and accounts for almost 20 percent of the province's manufacturing revenue, generated \$9.8 billion in 2016 – a seven percent increase over 2015. Nearly 60% of the companies in this sector are located in the Lower Mainland, and approximately 80% of the \$3.8 billion worth of agrifood and seafood exports from B.C. are from processed products.<sup>2</sup> Within the City of Vancouver, this translated into a 35 percent growth in local food jobs between 2010 and 2016.<sup>3</sup> In addition to exporting, the local and national demand for specialty processed food products is also growing. Recent years have seen a huge surge in demand for vegan products, such as Daiya dairy alternatives, Sunrise Soya tofu, and Gardein meatless meats, as well as local craft beer and spirits.

### APPAREL

The province's apparel industry is also growing rapidly to keep pace with global demand. The sector includes a variety of players across the design, manufacture and distribution of premium and performance apparel, footwear, and accessories. It is made up of more than 400 companies, 66 percent of which anticipate their workforce will continue to grow toward 2025. The industry now projects a minimum of 11,350 jobs being added to the sector between 2016 and 2025 (a nearly 60 percent increase in employment).<sup>4</sup> A significant amount of growth in this sector has been driven by four large global brands, but numerous small and mid-size firms contribute significantly to this sector. These include premium shoe and accessory companies such as Native Shoes and Herschel Supply Co., custom uniform manufacturers such as Blackwood Career Apparel and Boardroom Eco Apparel, and environmentally progressive designers and manufacturers such as Public Myth and Dream Designs.

### INDUSTRIAL TECHNOLOGY

In addition to more traditional manufacturing sectors, the region is experiencing significant growth in industrial technology sectors, such as cleantech, biotech, agritech and robotics. Vancouver already boasts strengths in cleantech and life sciences and is now experiencing substantial growth in advanced manufacturing and robotics (189.4% increase in startups over 5 years) and agritech/food innovation (171% increase in startups over 5 years).<sup>5</sup> Businesses in these sectors are often classified as professional services or office businesses, but increasingly, these firms seek industrial space to house R&D, production and distribution activities that do not conform to a traditional office setting. In light of this, the rapid growth of these sectors also needs to be considered in Vancouver's industrial business context.

### CLEANTECH

Cleantech, for instance, saw a 35% increase in firms between 2011 and 2017 in B.C. – the majority of which are located in the Lower Mainland.<sup>6</sup> In addition, jobs in Vancouver's cleantech sector grew by 20% between 2010 and 2016.<sup>7</sup> Locally, this sector includes companies in renewable energy, wastewater processing, green buildings, advanced material recovery and bio-pesticides, among others. A large proportion of these businesses self-identify as manufacturing operations, seeking both traditional industrial spaces and those that allow them to have a mix of office and industrial space on site.

### DEFINITION

Industrial tech, sometimes referred to as "deep tech" transforms the physical world as opposed to activities online. Because of its physical nature, companies in industrial tech sectors often require industrial space to operate.

1 'The Great Remake: Manufacturing for Modern Times', McKinsey June 2017

2 Sector Snapshot: B.C. Food and Beverage Manufacturing', Province of British Columbia, 2016

3 State of Vancouver's Green Economy', Vancouver Economic Commission, 2018

4 'British Columbia Apparel Industry Labour Market Partnership', BC Alliance for Manufacturing, 2017

5 'Global Startup Ecosystem Report 2018', Startup Genome & Global Entrepreneurship Network, 2018

6 'British Columbia Cleantech', KPMG, 2016 Status Report

7 'State of Vancouver's Green Economy', Vancouver Economic Commission, 2018

## BIOTECH

In addition, the biotech and life sciences sector shows steady growth in B.C. despite 80% of companies having fewer than 10 employees.<sup>8</sup> Many smaller biotech businesses operate in office and lab facilities on hospital and university campuses, but more well-established firms are seeking light industrial space throughout the region to house R&D, production, and distribution activities. Approximately 70% of British Columbia's biotechnology industry is based in Metro Vancouver, and many are currently hiring for positions in manufacturing, quality assurance, and distribution positions.<sup>9</sup> In addition, local innovations in wearable technology are entering the health sector, requiring industrial space for product development.

## DIGITAL ENTERTAINMENT & INTERACTIVE (DE&I)

The digital entertainment industry, including animation and visual effects studios, sound studios, mobile & video game production, and augmented & virtual reality companies is also notably present in Vancouver's industrial districts. While only a small fraction of companies in this sector are producing physical goods (e.g. virtual reality headsets), the processes they use can be space intensive, requiring high ceilings, loading bays, and large, flexible floorplates. The digital entertainment sector is growing by 6% each year (as measured by wages)<sup>10</sup>, requiring building types that often clash with zoning and put a strain on light industrial space.

## SPACE NEEDS

Manufacturers of uniquely Vancouver goods come with a specific set of space requirements affiliated with a greater emphasis on research and development, as well as investment in equipment, technology and efficiency measures. While the food processing sector uses a more traditional industrial layout (larger floorplates with a high percentage of manufacturing and warehouse space and a small percentage of office and showroom space), others sectors now have much higher office and showroom requirements. There is also a citywide shortage of lab space which is becoming increasingly critical to many industrial sectors.

8 'The Life Sciences Sector in BC: Economic Impact Now & in the Future', LifeSciences BC, October 2015

9 'Sequencing the Data: People Driving Canada's Bioeconomy', Biotalent Canada, 2013; Indeed.com

10 'HR Tech Group Salary Survey', HR Tech Group, multiple years

## SPACE REQUIREMENTS BY MANUFACTURING SUBSECTOR

Important Spaces Characteristics of Businesses Surveyed

Sector	Expansion Plans	Size	Space Characteristics
Food Processing	In the next two years: 63% anticipate expanding 58% considering relocating	Range of spaces occupied: 150-12,000 sq. ft. indoor 0-4000 sq. ft. outdoor	Key characteristics include: Loading Bays, Truck Access, Ground Floor Occupancy, Proximity to Employees, Clients & Amenities
Apparel	In the next two years: 85% anticipate expanding 28% considering relocating	Range of spaces occupied: 3000-5000 sq. ft. indoor 0-5000 sq. ft. outdoor	Key characteristics include: Loading Bays, Truck Access, Ground Floor Occupancy, Proximity to Employees & Clients
Cleantech	In the next two years: 95% anticipate expanding 54% considering relocating	Range of spaces occupied: 500-7000 sq. ft. indoor 0-3000 sq. ft. outdoor	Key characteristics include: Loading Bays, High Ceilings, Truck Access, Close Proximity to Employees, Clients, and Suppliers
Biotech <small>*note: sample size was limited for this sector</small>	In the next two years: 85% anticipate expanding 55% considering relocating	Range of spaces occupied: 6500-8500 sq. ft. indoor 0 sq. ft. outdoor	Key characteristics include: Truck Access, High Ceilings, Proximity to Employees, Clients and Major Highways
Digital Entertainment	In the next two years: 55% anticipate expanding 70% considering relocating	Range of spaces occupied: 650-30,000 sq. ft. indoor 0-750 sq. ft. outdoor	Key characteristics include: High Ceilings, Loading Bays, Proximity to Suppliers, Clients & Employees, Amenities, Sustainability

### INSIGHT

Increased demand for Vancouver's tradeable goods means Vancouver can expect increased demand for industrial mixed use space.

Across all five of these sectors, an increase in demand for built-to-suit head offices has been seen across the region. MEC, DHX Media, and Saltworks Technologies have recently moved into new headquarters in industrial or mixed employment districts in the region, and Stemcell, Nature's Path, and Lululemon have all initiated the development of new headquarters.

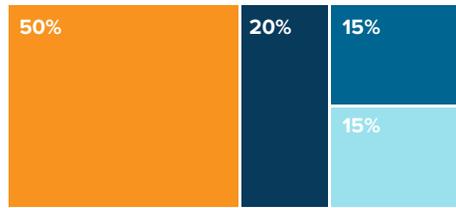
## SPACE UTILIZATION BY SUBSECTOR

Breakdown of How Indoor Space is Utilized By Survey Respondents

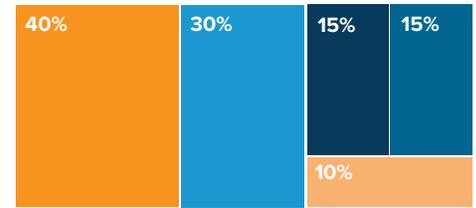
### ACTION

Cleantech, biotech, high performance apparel and digital entertainment companies need a stronger mix of office, industrial, and flex space. Adding industrial characteristics to office buildings, such as loading bays, freight elevators, slightly higher ceilings, higher voltage power and open floorplates could help meet this need.

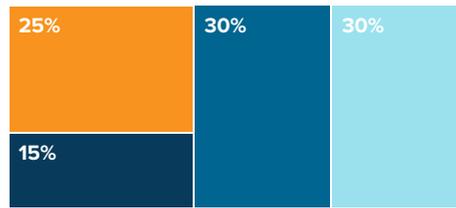
### CLEAN TECHNOLOGY



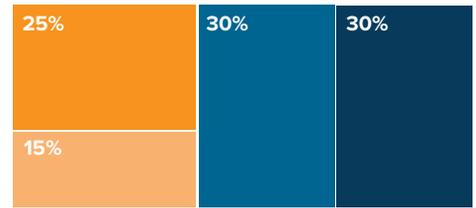
### DIGITAL ENTERTAINMENT



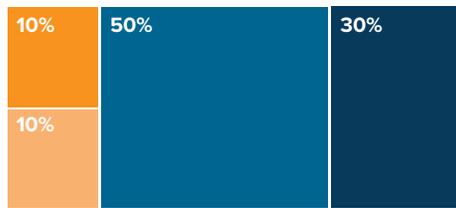
### BIOTECH



### APPAREL



### FOOD PROCESSING



## INCREASED DEMAND FOR LOCAL SERVICES

### DEFINITION

Back-of-house services refer to the unseen operations that support consumer-facing sectors (e.g. apparel wholesale to retailers, repair of medical devices for health care, waste management)

Population growth is driving demand for back-of-house industrial services, leading to increased pressure on central industrial districts to be used more efficiently.

Vancouver's local market for industrial services is growing in step with its population. More than a million additional people will be moving in to the region in the next 20 years, requiring services such as food distribution, construction and renovation, and equipment/vehicle maintenance and repair. Furthermore, product-as-a-service businesses that transform the customer relationship from a transactional one (e.g. selling a car) to a recurring, fee-based one (e.g. car sharing) are proliferating in dense urban areas, offering solutions from clothing rental to tool libraries. These businesses require space for storing, refurbishing and repairing their goods in reasonable proximity to their clientele. An already limited amount of industrial land means these needs will need to be met with less space, demanding greater productivity per acre of industrial land.

### INSIGHT

Demand for central service and distribution space is increasing, calling for higher productivity of existing industrial lands.

A number of distribution and service businesses are considering relocating due to rising costs affiliated with operating in the city (as many as 50% are considering relocating in the next two years); however, of those that are staying, two-thirds anticipate expanding their operations in the next two years. These include food distribution businesses, local tourism companies, repair and maintenance services, equipment rental companies, and wholesalers whose main clientele are within the city limits. Staying local is particularly important for businesses that spend a lot on fuel and driver wages – two costs that would rise exponentially if they moved outside the city limits.

## ACTION

The Vancouver Economic Commission launched an Industrial Concierge Service to facilitate colocation among small and mid-sized industrial businesses.

[www.vancouvereconomic.com/industrialconcierge](http://www.vancouvereconomic.com/industrialconcierge)

## SPACE & RESOURCE SHARING

One mechanism industrial businesses are employing to increase efficiency and decrease overhead costs is colocation – sharing space, equipment, and technical expertise with complementary businesses. Of the businesses surveyed, 14% of manufacturers and 20% of distributors are sharing an operating space; 28% of businesses are sharing technical expertise and services; 17% are sharing equipment; and 5% are sharing vehicles and delivery services. The Vancouver Economic Commission recently launched an Industrial Concierge Service to facilitate colocation and resource sharing among a wider array of industrial operators.

Businesses are also employing new technologies to facilitate resource-sharing and boost operational efficiency. **Commissary Connect** has developed a digital platform for efficiently sharing industrial-scale cooking equipment among its commercial kitchen members. **Freightera** has developed an online marketplace to facilitate shared shipping and trucking services, and **DirectTap** has developed a digital tracking system to efficiently distribute craft beer and cider throughout the city on behalf of more than a 80 local breweries and cideries. In addition, individual distributors are employing route optimization software, vehicle diagnostic systems, and automated picking technologies to boost productivity on the road and in their warehouses.

A couple of commercial real estate brokers discussed selling clients on productivity per square foot, recognizing that the size of space required changes drastically if businesses are able to operate more efficiently.

## MULTI-STOREY & MODULAR INDUSTRIAL SPACES

Vancouver has started exploring multi-storey industrial zoning as a means of increasing available industrial space within a limited land base. Interviews with developers, however, revealed hesitancy to be the first to develop true multi-storey industrial developments. The cost of construction rises with additional floors and the pool of potential tenants shrinks. One developer suggested the City could help mitigate the financial risk of the first few true multi-storey industrial developments through partnerships to develop City-owned industrial sites.

Smaller industrial service providers, artists, and small manufacturers have expressed an openness to locating above ground floor as long as loading bay access and an accompanying freight elevator is available. A number of small-scale service providers such as moving companies, waste haulers, landscaping businesses, and renovation contractors are currently operating out of storage units, sub-leased garages, and shipping containers on surface parking lots. Temporary, low-cost, or modular construction options like those used to house temporary affordable housing could be used to build space for these types of service providers. Since many of these businesses also need a modest amount of office space, partnering with a coworking space operator could be beneficial to making spaces like this work.

## ACTION

The City of Vancouver is already piloting modular affordable housing in industrial areas – a similar model could be used for small light industrial businesses that primarily need storage space and a small office.

## SPACE REQUIREMENTS FOR LOCAL SERVING DISTRIBUTION & REPAIR

Local-Serving Distribution and Repair Businesses Typically Fall into Three Space Tiers

Sectors	Size	Space Characteristics
<b>TIER 1: SMALL SERVICE</b> (eg. moving companies, landscape services, renovation contractors)	Range of spaces occupied: <b>2000-4000</b> sq. ft. warehouse, small office <b>100 - 500</b> sq. ft. parking, truck access, cleaning	Key characteristics include: Loading bay & freight elevator if on upper floor, proximity to clients & employees, outdoor space
<b>TIER 2: B2B DISTRIBUTION</b> (eg. wholesale construction & office supplies, equipment & event rentals)	Range of spaces occupied: <b>15,000-25,000</b> sq. ft. warehouse, small office <b>1000-2000</b> sq. ft. parking, truck access	Key characteristics include: Loading Bays, Outdoor space for modest fleet, ground floor occupancy, proximity to clients
<b>TIER 3: LARGE WHOLESALE</b> (eg. food distribution, marine-related services, lumber & building supply)	Range of spaces occupied: <b>75,000-150,000</b> sq. ft. warehouse, plus office <b>10,000-20,000</b> sq. ft. outdoor, large truck access	Key characteristics include: Extra high ceilings for racking, large truck access, (sometimes) built-to-suit cold storage

## RELOCALIZATION OF SUPPLY CHAINS

Changing trade dynamics, social & environmental concerns, and technological advancements are driving a shift from megafactories to small urban manufacturing.

The manufacturing sector in Vancouver has changed significantly in the past one hundred years. Vancouver has transitioned from a town of large processing facilities for natural resources to a place where the vast majority of manufacturers have less than 35 employees and occupy less than 10,000 square feet.

### TRADE DYNAMICS

**Uncertainty around trade agreements, volatile commodity markets and a global shift toward establishing a circular economy drives the relocalization of supply chains and materials processing.**

Tariffs on food products, for instance, have led many local food processors to consider Canadian suppliers and local farmers in order to reduce the risk of supply chains becoming impacted by trade wars and fluctuating currency rates. Commodities markets, such as secondary markets for plastics and textiles in China and India respectively, are closing down, creating a desire among local waste haulers and recyclers to process more materials within the region.

More than half of the businesses surveyed claim to be engaged in some level of waste reduction initiatives. The opportunities to create waste-to-resource connections are most prevalent when industrial businesses of varying sectors are located in close proximity to one another.

### SOCIAL & ENVIRONMENTAL CONCERNS

**Manufacturers must respond to local policy and consumer demand for increased transparency as well as social and environmental responsibility.**

Tackling sustainability issues used to be reserved for extremely progressive brands, but that is no longer the case. Sustainability measures are becoming pervasive. Nearly a quarter of businesses surveyed are retrofitting their buildings and equipment to be more efficient, converting their vehicles to run on cleaner fuels, and incentivizing low impact commuting among employees. In addition, ten percent of businesses surveyed are investing in renewable energy. These measures are not only being demanded by consumers and employees, many businesses are opting to work only with suppliers that share similar environmental values. Relocalizing supply chains helps businesses build stronger relationships with suppliers while reducing transportation-related costs and emissions derived from moving materials.

Vancouver's environmental policies such as the Zero Emissions Buildings Bylaw and the Zero Waste 2040 Strategy are also driving shifts in the manufacturing landscape, encouraging operators to develop high performance building products in close proximity to their end markets to reduce emissions and waste. Businesses are also choosing to locate in clusters to gain other business advantages affiliated with being close enough for collaboration. The Mount Pleasant brewers get together once a month to discuss shared challenges, the Railtown Design District businesses collectively market their services, and the Malkin Ave produce wholesalers rely on proximity to serve their clients' needs in a "one stop shop".

### TECHNOLOGY & TALENT

**Employees and technological advances are another driving factor behind the re-urbanization of industry.**

Employees increasingly seek out cities that culturally align with their values and lifestyle, and businesses, competing for talented individuals that can keep up with the rapid pace of technological change, are following suit. In particular, businesses are catching up to design talent, large immigrant populations, and technologically-savvy young people who all play an important role in industrial operations. Students from both KPU's Design School and BCIT's Construction Management programs are 90 percent hired before they graduate.

#### ACTION

Facilitate waste-to-resource connections among complementary businesses in order to meet new environmental imperatives and reduce costs affiliated with disposal.

#### INSIGHT

Clustering is becoming increasingly important for urban industrial operators.

## **ACTION**

Facilitate the development of sector hubs to help retain and grow important business clusters in Vancouver.

For some sectors, locating in close proximity to competitors enables the attraction of high quality employees. For instance, visual effects businesses grow and shrink according to the projects they have won bids for. Employees that are working in a district with many visual effects companies are able to move freely from contract to contract between businesses that currently have a lot of work.

## **HUB DEVELOPMENT**

Companies in the cleantech, deconstruction/remanufacturing, product development, and high performance apparel sectors in particular have identified a desire to establish sector hubs or districts in which a number of complementary businesses could be located to share resources and training opportunities, and create a central place for the industry to gather, share ideas, and operate in close proximity to competitors, suppliers, and clients.

## **CHANGING INFRASTRUCTURE NEEDS**

Technology is infiltrating all industrial sectors, increasing the need for energy infrastructure and digital connectivity in industrial districts.

## **INSIGHT**

Highly efficient digital connections and increased energy are required to meet demand of industrial businesses.

Institutions and think tanks around the world have been studying the impact of technology on the future of work, but often overlook the way these same technologies impact our infrastructure needs. Increased automation, online commerce, remote work, and artificial intelligence systems are increasingly being introduced to industrial contexts. Companies are using telematics to optimize delivery routes, digital diagnostic systems to alert when equipment needs maintenance, automated picking systems to fulfill orders in a warehouse and 3D printers and robotics to quickly test designs and fabricate new products.

Three new industrial uses are setting up shop in the region, responding to business and consumer demand: data centres, marijuana production facilities, and e-commerce fulfillment spaces. Each has specific and intensive energy needs.

The influx of technology and introduction of highly automated new sectors is significantly increasing power requirements for buildings, as well as increased demand for digital infrastructure in industrial areas. Traditionally, industrial areas have been seen as low priority for renewable energy and digital investments; instead, investments have been targeted at high density residential districts. In order to meet the new needs of industrial operators, utilities, telecoms, and other service providers will need to proactively plan for these evolving needs in industrial districts.

# LOCAL CHALLENGES

## REAL ESTATE DYNAMICS

The top three challenges for industrial businesses are related to regional real estate dynamics.

The top three challenges outlined by survey respondents are: increased operational costs; finding or keeping qualified employees; and gaining access to affordable operating spaces.

A 30 percent rise in property taxes have driven up costs in light industrial districts in Vancouver between 2017 and 2018, in addition to a 30 percent increase the year before.<sup>1</sup> These drastic increases in property assessments impact 60 percent of survey respondents – 40 percent because they are paying triple net leases in which the taxes are passed on to the tenants leasing a space and another 20 percent that own their own space. Some businesses report paying an equal amount in property taxes as they are in base rent which inflates their operational costs and makes it difficult to plan for the future.

Real estate dynamics also make it difficult to find and retain qualified employees. Business owners responding to the survey identified a lack of affordable housing in the region as a barrier to attracting service or production employees. Wages cannot support the high cost of living in Vancouver, and paying higher wages would increase operating costs beyond a sustainable level. Where affordable housing options exist in the region, there are few public transit options, therefore creating long commute times or requiring employees to own a vehicle and pay for fuel in order to drive to their place of work in industrial districts.

Finally, low vacancy rates and a diminishing supply of industrial land limits the ability of industrial businesses, particularly startups, scaleups and arts production businesses, from accessing affordable space to operate. Past planning decisions that saw a significant amount of industrial land rezoned to residential combined with the introduction of non-industrial users into industrial districts (e.g. social services, office uses, large format retail) exacerbates the shortage of affordable operating spaces. Competition for space is in turn driving up costs beyond what industrial users are able to pay.

### INSIGHT

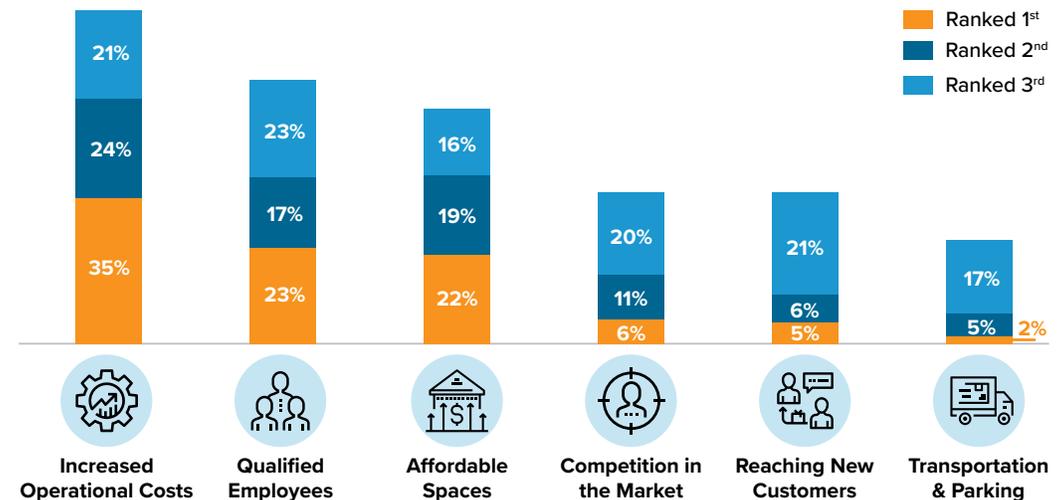
Property tax increases reflect land speculation and inflated property values in industrial districts that are disconnected from the businesses that are bearing the cost.

### ACTION

Artisan Zoning has been employed in a number of North American cities to allow small scale light industrial operations in sectors such as food processing, furniture making, brewing, and jewellery making & apparel manufacturing, in underutilized retail spaces.

## CHALLENGES IMPACTING INDUSTRIAL BUSINESSES

Ranked in order of importance by survey respondents<sup>2</sup>



<sup>1</sup> 'Market Movement by Jurisdiction Table', BC Assessment, 2018

<sup>2</sup> Although Safety & Security was not a ranked option, several businesses noted that conditions in their district have declined in recent years, citing high degrees of homelessness, addiction, and theft present. These challenges were mostly noted in inner city industrial districts with nearby social services.

## REGULATORY RIGIDITY

Regulatory rigidity contributes to financial pressures and prevents local startups and small businesses from setting up operating spaces.

Survey respondents cited municipal permitting and licensing fees, as well as additional costs incurred during the long waiting periods before permits are issued, as key contributors to increased operational costs. These costs are particularly prevalent among businesses that have innovative operations, conduct business in multiple municipalities, or interface with public institutions on a regular basis (such as waste management businesses and solar installers).

### KEEPING PACE WITH THE CHANGING NATURE OF INDUSTRY

It is particularly difficult to navigate the permitting system for businesses that develop innovative products or processes. Existing zoning language is difficult to apply to these new activities and leads to complications and disputes that worsen already long wait times. Survey respondents cited wait times of 6 to 18 months to secure appropriate permits because their activities are poorly understood or do not align clearly with existing permitted use categories. Business owners must continue to pay rent for these months, despite being unable to commence operations. Although many of the City of Vancouver's planning frameworks technically allow most industrial business types within designated industrial districts, they are written for a different era and leave little flexibility for businesses that cross multiple categories. Business that include multiple uses or are in sectors with which front line permitting staff are unfamiliar seem to have the hardest time obtaining permits.

### CREATING FLEXIBILITY IN PERMITTING PROCESSES

The industrial business landscape has changed since many of our industrial zoning schedules were initially written. For instance, Tobacco Products Manufacturing and Ice Manufacturing are both named as outright allowable uses in the I-2 zoning schedule even though neither of these uses are present in Vancouver anymore.

Rather than updating zoning bylaws every few years, some cities are choosing to replace specificity (e.g. battery products manufacturing, rubber products manufacturing) with a set of criteria for front line staff to use when evaluating applications (e.g. percentage of space dedicated to production, distribution and repair activities). New York, for instance, defines industrial operations as all "production, distribution, and repair" activities and applications are then evaluated on an individual basis to ensure the actual operations of the business are industrial in nature. Front-line staff undergo training to better recognize and reflect trends in the business environment. This type of regulatory flexibility makes permitting of new, innovative, or uncommon uses easier, faster and more hospitable.

The City of Vancouver is currently undergoing a Regulatory Review and a citywide Economy and Employment Lands Review. Both of these processes present significant opportunities to address outdated or inflexible zoning language and permitting processes.

## REGIONAL COORDINATION

A lack of regional coordination is costly for businesses operating across multiple municipalities in Metro Vancouver.

Permitting and licensing is complicated and costly for businesses that operate across multiple municipalities in Metro Vancouver. Each municipality has different zoning schedules and permitting processes, leading to a duplication of efforts for businesses that wish to operate across the region, with multiple applications for business and commercial vehicle licenses. This process is time consuming and costly, driving up the cost of doing business, and ultimately the cost of goods and services to consumers.

### INSIGHT

Many industrial users are finding the permitting process at the city difficult to navigate because they don't cleanly fit within existing zoning categories.

### INSIGHT

Industrial businesses often require multiple business and vehicle licenses which can be costly and inefficient.

## IDENTIFYING REGULATIONS THAT IMPEDE RESILIENCE

Regulatory inconsistency is particularly detrimental to businesses that interface with municipal bylaws and regulations as part of their day-to-day operations. Survey responses from solar installers, interior designers, waste haulers and recyclers all pointed to incongruous and confusing regional regulations as a major source of stress and financial burden. These conflicting regulations actually impede activities that contribute to regional sustainability and resilience, such as renewable energy generation, local tourism, material recovery and affordability of goods and services.

## DRIVING CONSISTENCY ACROSS THE REGION

In other regions across Canada, a number of government functions have been streamlined across municipal boundaries to drive regulatory consistency and reduce redundancy. Even within Metro Vancouver, six cities participate in the Metro West Inter-Municipal Business License program and provide a single business licence for construction or trades related businesses. A similar approach should be considered for business sectors that impact regional sustainability and resilience. Metro Vancouver is engaging municipalities across the region in an Industrial Lands Review over the next 18 months, making this an opportune time to identify and address sectors and business types that need better regional coordination.

### ACTION

Expand the intermunicipal business license program to include other regional industrial sectors.

## INFRASTRUCTURE FOR THE "MISSING MIDDLE"

A lack of middle income housing and regional transit is creating a staffing crisis for industrial employers.

Although a lot has been done in recent years in attempt to curb Vancouver's housing affordability challenges, further action needs to be taken. Many industrial employers are already struggling to find and retain qualified employees due to inflated housing prices and limited transit options. Local governments across the region have found ways to support affordable housing for the most vulnerable, but many middle class families are being forced out of the city by rising costs of living. This creates a challenging environment for employers.

## EMPLOYEE HOUSING & ON-DEMAND TRANSIT

Vancouver has led the development of a comprehensive affordable housing strategy within the city limits, but in order to address middle income housing needs (particularly those for families), a regional approach to affordable and middle income housing needs to be taken. Translink is already thinking this way – staff are considering what it means to have transit-oriented industrial districts linked to key housing clusters. They have also expressed an interest in exploring on-demand shuttle services to meet transit needs in industrial districts. This will require identifying key clusters of industrial workers, including where they are coming from and at what times of day, and orienting shuttles to meet these needs.

## AFFORDABLE INDUSTRIAL SPACES

Limited regional industrial space is resulting in an acute affordability challenge for industrial businesses in Vancouver.

Vancouver's industrial vacancy rate is the second lowest in all of North America at approximately 1.7%.<sup>1</sup> In part, this is a result of supply and demand dynamics: Vancouver's industrial sectors are growing, an increasing number of technology businesses are needing industrial space, and a booming film and television sector relies on industrial spaces for shooting green screen scenes, setting up stunts, and storing equipment. Demand for space, however, is not the only force acting on industrial areas. A number of rezonings of former industrial districts, as well as

### INSIGHT

Industrial protection policies are not working.

<sup>1</sup> Avison Young, Spring 2018

exemptions for social services, schools, affordable housing, and other community needs have shrunk an already limited industrial land base.

### SPECULATION

In recent years, foreign ownership taxes and other real estate investment policy combined with rezonings in industrial areas and city-wide land value increases have led investors that have traditionally been investing in Vancouver's housing market to invest in industrial space as well. Some sites have sold at a rate that exceeds the value of what can be built on the site.

Unlike residential tenancy, commercial leasing has no representative body, meaning new owners are easily able to increase lease rates, renovict tenants, and be relatively unresponsive to tenant needs with little repercussion.

### STARTUP & ARTS PRODUCTION SPACE

Industrial startups and artists have a particularly hard time finding affordable operating spaces. In general, Vancouver benefits from a strong startup ecosystem, a well educated community, and strong support structures for incubating entrepreneurs and artists. Of the businesses surveyed, almost 40 percent claimed that one of their biggest opportunities is developing new products, processes or technologies. Many of the industrial businesses that have managed to scale IP, tech, or new processes in Vancouver have gone on to become some of the region's biggest employers and economic drivers, such as Westport, Stemcell, MDA, and Arc'teryx.

Although they are not often thought of as economic drivers, artists are also significant contributors to the regional economy. They develop the cultural assets needed to attract and retain young people in Vancouver. In order to ensure the next wave of economic drivers are able to establish themselves in the region, industrial startups and artists need to be supported in finding affordable space to operate, especially throughout their nascent years when they are most vulnerable to failure.

#### INSIGHT

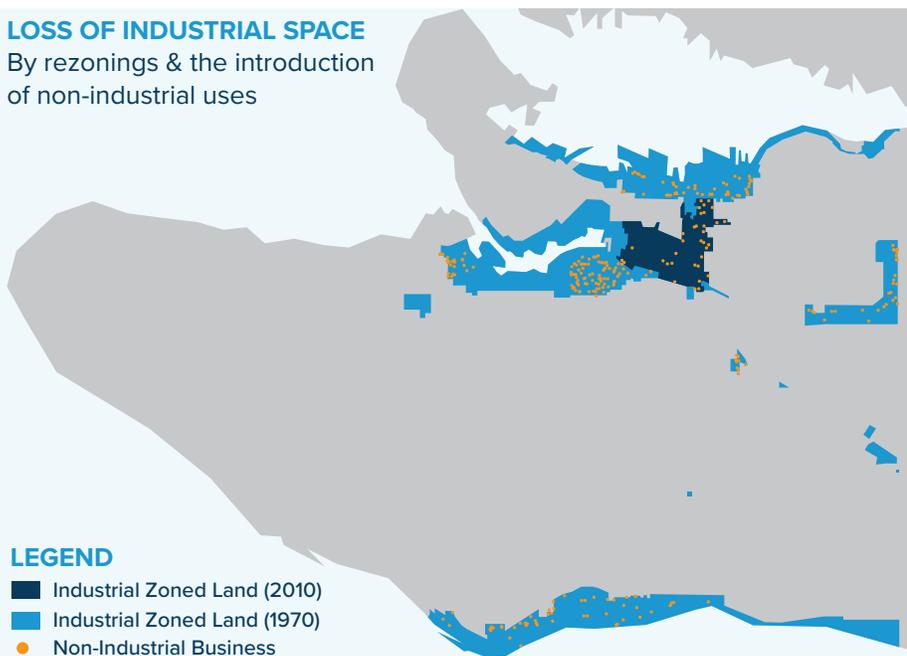
Industrial properties are being sold to investors that are purchasing them above market rate.

#### INSIGHT

Startups and arts production businesses are most vulnerable to the industrial affordability crisis as space is one of their largest overhead costs and their revenues in early years of operation can be unpredictable.

### LOSS OF INDUSTRIAL SPACE

By rezonings & the introduction of non-industrial uses



#### LEGEND

- Industrial Zoned Land (2010)
- Industrial Zoned Land (1970)
- Non-Industrial Business

**565** Hectares Rezoned

from industrial to other uses

in Vancouver in the last 30 years

Globe & Mail, May 2018

**10%** of Social Services

in Vancouver are in industrial districts

CoV Business License Data, 2017

**250,000** Square Feet

industrial space used by doggy daycares

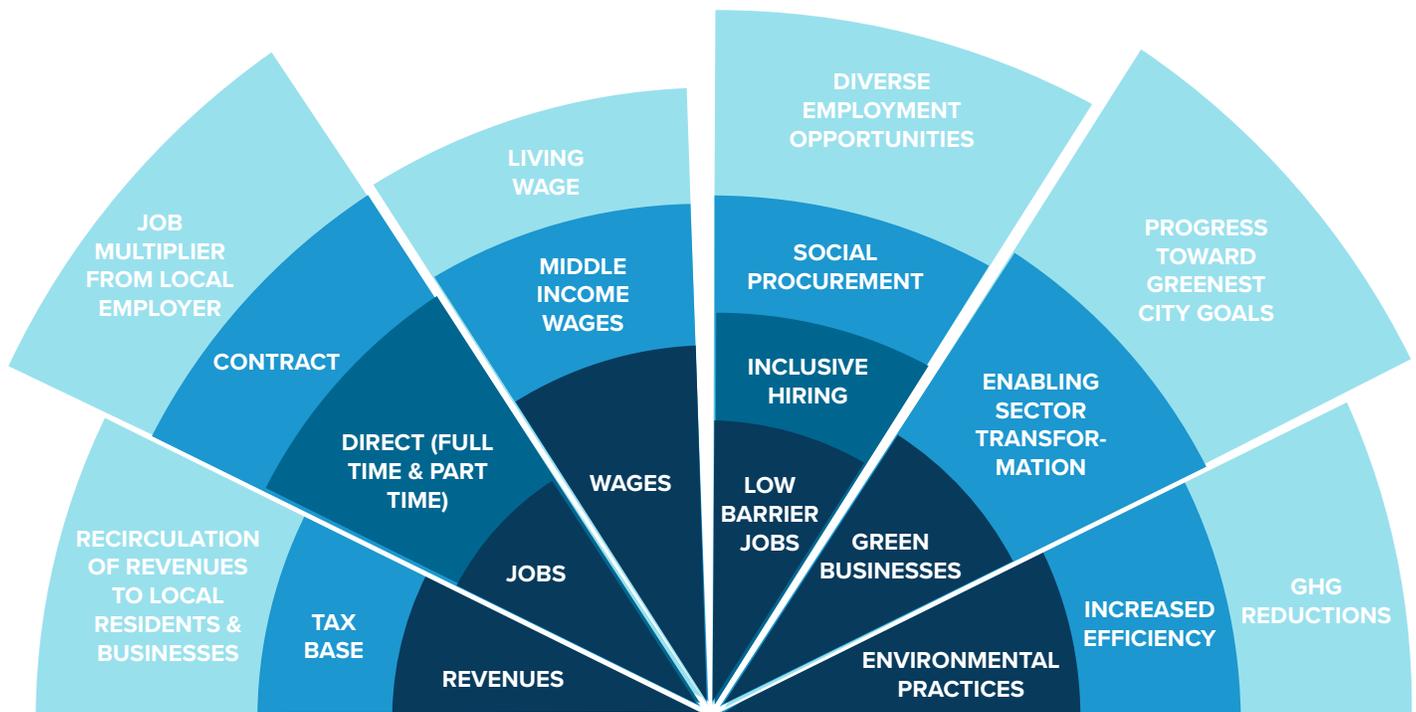
CoV Business License Data, 2017; VEC Survey Data

**70** Schools & Institutions

in industrial & mixed employment zones

Dun & Bradstreet Database, 2018

# INDUSTRY IMPACTS



## POSITIVE IMPACTS OF INDUSTRIAL BUSINESS

Industrial businesses not only generate jobs and wealth, they also play a significant role in the social, environmental, and cultural well-being of the community.

### EMPLOYMENT & WEALTH CIRCULATION

Industrial businesses employ approximately 60,000 full time employees, 58 percent of whom are making a living wage (above \$20/hr or \$43,000 per annum)<sup>1</sup>. In addition, industrial businesses support a network of part time and contract workers (about 15,000 in total)<sup>2</sup> and recirculate revenues in the community by buying from local and regional suppliers (respondents report 35 percent of suppliers are within the city while another 27 percent are within Metro Vancouver). This is consistent with local economic multipliers identified in other local impact studies.<sup>3</sup>

The combined revenues of the businesses surveyed are approximately \$385 Million. This represents approximately 5.6% of small and mid-size industrial operators in Vancouver, meaning citywide revenues from industrial SMEs are approximately \$7 Billion. In addition, survey respondents contributed upwards of \$220 Million in wages to the community. Scaled to the city, this is nearly \$2.4 Billion in wages contributed to the local economy annually.<sup>4</sup>

1 Survey data scaled to the City of Vancouver. Three large industrial employers (with more than 2000 employees each) also completed the survey. They have been omitted from these calculations as they skew the citywide calculations, but the combined revenues and wages from these employers double these numbers.

2 Survey data scaled to the City of Vancouver.

3 'The Power of Purchasing: The Economic Impacts of Local Procurement', LOCO BC, 2013

4 Survey data scaled to the City of Vancouver.

### COMMUNITY IMPACTS

Industrial businesses also contribute significantly to environmental and social outcomes. Approximately 10 percent of survey respondents self-identified as green businesses that are directly engaged in improving the environment. Many are contributing to the transformation of entire industry sectors by developing smarter, cleaner, more efficient ways to move goods and people throughout the city or providing better materials management systems.

Approximately 10 percent of respondents report using inclusive hiring practices to hire people with diverse educational backgrounds and ethnicities and those that have barriers to employment (e.g. language barriers or physical disabilities). These findings correlate with national data that report 10 percent of people hired in industrial districts have no formal education, 30 percent have a highschool or equivalent certificate and 10 percent have apprenticeship training.<sup>5</sup>

### INSIGHT

In order to achieve the social and environmental goals set out in Vancouver's Healthy City Strategy and Greenest City Strategies, we need to adopt a Gritty City Strategy that protects and supports industrial activity.

5 Census 2016

## INDUSTRIAL DISPLACEMENT

A significant number of industrial businesses anticipate relocating outside the city in the next 2 years.

### INSIGHT

Nearly 50% of industrial businesses are considering relocating outside the city in the next two years.

Ten percent of survey respondents plan on moving in the next two years and further 40 percent identified that they are considering moving. This means that nearly half of industrial businesses could relocate outside the city in the very near future. Business sectors most likely to leave are in the transportation and distribution sector (66 percent may relocate), and those most likely to stay are in the R&D, design, and professional services field (40 percent may relocate).

### IMPACTS OF INDUSTRIAL DISPLACEMENT

If ten percent of industrial businesses leave the City of Vancouver in the next two years, \$700M in revenues, 6000 jobs, and \$250M in wages will go with them. The majority of survey respondents that plan to relocate will go elsewhere in the region, but a small percentage intend to leave the region altogether. If the nearly 50% of businesses that are considering relocating end up leaving the city, Vancouver stands to lose approximately 30,000 full time jobs, \$3.6B in revenues, and \$1.2B in wages.

### INSIGHT

The potential impacts of industrial displacement are significant and include \$700M in lost revenues, \$250M in lost wages and 6000 lost jobs if only 10% of industrial businesses are displaced.

Displacing industrial businesses not only significantly impacts Vancouver's employment base, it also impacts the cost of goods and services in the city. Survey respondents report that more than 50 percent of their clients are located within the city limits and 35 percent of their suppliers. This means that as businesses are pushed further out of town, they will be forced to give up those business connections or increase the cost of their services to cover the additional expenses affiliated with reaching their clients and suppliers.

### INSIGHT

Industrial displacement will increase traffic congestion and GHG emissions in the region.

Distribution, tourism, and service businesses are particularly sensitive to added fuel costs and employee time on the road as transportation related expenses make up a high percentage of their overall costs. These added fuel costs have an environmental and societal impact. Emissions from transportation in Vancouver's Manufacturing, Wholesale-Distribution sectors accounted for 54,400 tonnes of carbon emissions in 2015.<sup>6</sup> Moving industrial operations away from their client base will result in increased traffic congestion and emissions.

## INDUSTRIAL INFRASTRUCTURE

In addition to being significant economic contributors, industrial businesses form an important foundation for all other business sectors in the city.

### INSIGHT

If industrial businesses are displaced from the city, the cost of doing businesses across all sectors will rise.

Industrial businesses underpin most other sectors in Vancouver from technology to retail; theatre to tourism; and technology to professional services. The disappearance of industrial businesses from the regional landscape eliminates an important layer of economic infrastructure. Industrial businesses form the back-of-house wholesale, machining, laundering, printing, catering, set production, equipment rental and machining functions needed for all other sectors to flourish. Focus Manufacturing, for example, does the metal work and machining for hundreds of clients in Vancouver, including some in aerospace, biotech, cleantech, and the security sector.

**Industrial businesses are a vital part of maintaining a functioning and resilient economy in Vancouver, now and in the future.**

<sup>6</sup> 'City of Vancouver Business Energy & Emissions Profile Data', Climate Smart, 2015

# INSIGHTS & ACTIONS

## INSIGHT

## ACTIONS

### 01 INDUSTRIAL MIXED USE

Cleantech, biotech, high performance apparel and digital entertainment sectors need a stronger mix of office, industrial, and flex space

**POLICY:** Advocate for multi-storey industrial-commercial development with enforced industrial requirements (e.g. loading bays, freight elevators, high power capacity) in central office & mixed employment districts

**POLICY:** Advocate for industrial building characteristics to be enforced under the Creative Products Manufacturing Zoning Bylaw

**DEVELOPMENT:** Advise developers on space needs affiliated with emerging and fast-growing economic sectors

### 02 INDUSTRIAL INTENSIFICATION

As population grows, so does demand for back-of-house industrial services such as repair, maintenance, goods distribution, construction, and food processing, requiring increased output from existing spaces

**POLICY:** Advocate for infill light industrial space policies throughout the city

**PILOT:** Pilot affordable, modular construction models for small business storage space complemented by coworking office spaces for light industrial use

**DEVELOPMENT:** Advocate for using City-owned land to experiment with development of multi-storey light industrial spaces in partnership with private developers

### 03 CLUSTER SUPPORT

Relocalization of supply chains increases the importance of clustering and collaboration for design, production, and materials management companies

**FACILITATION:** Facilitate connectivity between complementary businesses and proactively engage potential new entrants to preserve and enhance existing industry clusters

**PILOT:** Work with key business clusters, developers, funders and other levels of government to establish industry hubs (e.g. deconstruction hub, cleantech hub)

### 04 ENERGY & INFRASTRUCTURE

New user types and technologies are changing the energy and digital infrastructure needs in industrial districts, requiring proactive energy and connectivity planning

**PLANNING:** Work with BC Hydro and the City of Vancouver and telecoms providers to proactively plan for energy-intensive uses (in conjunction with renewable energy planning) and digital infrastructure in industrial districts

**PILOT:** Initiate energy storage, waste heat recovery, microgrid, and other smart city solutions with industrial businesses and within industrial districts

**ENGAGEMENT:** Engage and advise infrastructure providers on industrial business needs

### 05 PROPERTY TAXES

Property taxes are out of step with industrial activities, exacerbating costs of doing business

**ADVOCACY:** Advocate that the Province of B.C. revise the property assessment process to reflect actual site activity and who is responsible for paying the taxes

**ENGAGEMENT:** Engage the provincial government in exploring the creation of a commercial tenancy act and the formation of an organization that can enforce commercial tenant rights

## 06 LOCAL PERMIT PROCESSES

City permitting processes can be difficult to navigate and have not kept pace with the changing nature of industry, resulting in frustration and delays on behalf of both businesses and City staff

**POLICY:** Advocate for updating the language in zoning schedules to be more flexible and representative of local and global industrial business trends

**TRAINING:** Advocate for establishing space- and performance-related criteria to assess permit applications and train front line staff to find solutions for unusual operations

## 07 REGIONAL REGULATION

Industrial businesses often require multiple business and vehicle licenses, which can be costly and inefficient. Some sectors find inconsistent regulations across the region difficult to navigate.

**POLICY:** Advocate to expand the Metro West Intermunicipal Business License program to additional municipalities and sectors (e.g. materials management, film, logistics)

**ADVOCACY:** Advocate for regional coordination of building codes, permitting processes, and license recognition, starting with priority sectors (e.g. tourism, solar energy, waste management)

## 08 HOUSING & TRANSIT OPTIONS

Staffing is a critical challenge for industrial operators due to the lack of housing and transit options for middle income families in the region

**PLANNING:** Advocate for the development of a regional housing strategy that prioritizes middle-income housing for families that connects to public transit

**PILOT:** Use UrbanLogiq's analytics platform to identify locations for Translink to pilot on-demand transit to industrial districts

## 09 LAND SPECULATION

Real estate investors and speculators are purchasing industrial land at a growing rate, outbidding local developers and businesses and limiting industrial development potential

**POLICY:** Advocate for policies that can help curb speculation and purchases of industrial land as an investment only

## 10 COMPETING PRIORITIES

Competing land uses such as social housing, public institutions and non-industrial businesses are eroding the supply and availability of industrial space

**POLICY:** Advocate to prohibit the use of industrial space as a catch all for unusual uses and instead find ways to integrate these into commercial and residential districts (e.g. doggy daycares, car dealerships, social services)

**PILOT:** Pilot the development of artisan studios in underutilized retail spaces in partnership with Business Improvement Associations and nonprofit developers

**POLICY:** Advocate for the development of Artisan Zoning

## 11 STARTUP SPACE

Developing affordable industrial startup spaces and artist production spaces is critical to the city's economic future and requires public investment

**PILOT:** Develop affordable light industrial and arts production space as part of the implementation of the False Creek Flats Local Area Plan

**ENGAGEMENT:** Engage nonprofit developers (eg. BC Artscape, CIRES, Catalyst) about adding affordable industrial projects to their portfolios



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