BC ALLIANCE
FOR MANUFACTURING

BC Apparel Industry Labour Market Partnership

Labour Market Information Research Report

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Canada

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The views and opinions expressed in this report are those of the its author(s) and not the official policy or position of the Government of British Columbia.

This report was prepared in partnership by:

BC Alliance for Manufacturing

The BC Alliance for Manufacturing is a coalition of like-minded industry associations and economic development agencies that share a common vision to promote, advocate for and develop a world-class manufacturing sector in British Columbia.

The 18 member organizations represent over 6,000 businesses in the design, supply, material handling, fabrication and logistics areas of the manufacturing value chain; people-based organizations that train and develop skilled workers for high-paying manufacturing jobs; and community-focused Chambers of Commerce and Boards of Trade who recognize the significant economic contribution to their cities derived from manufacturing.

R.A. Malatest & Associates Ltd.

Founded in 1985, R.A. Malatest & Associates is a consultancy providing customized research solutions from in-depth program evaluations to client satisfaction studies.

Malatest is one of Canada's largest independently owned and operated research and evaluation firms. The company has a staff of approximately 65 professional researchers in offices in Victoria, Edmonton, Toronto, Ottawa and Halifax.

Gen Y Inc.

Gen Y Inc. is an international consulting group focused on optimizing workplace culture and attracting and retaining talent based on fit. Having created a proprietary cultural assessment, Gen Y quantifies culture and uses data based observation to advise the clients it works with, and implement measurable solutions.

ACKNOWLEDGEMENTS

The BC Apparel Labour Market Partnership (LMP) project emerged from a late-2014 industry initiative to build collaboration on common issues faced by technical performance and premium apparel companies. Strong support has been received from the Government of British Columbia through its Ministry of Jobs, Tourism and Skills Training.

The main goal of the LMP project is to address the significant skills shortages faced by premium and performance apparel companies in British Columbia. Complementary work, in parallel to the LMP, is also being done by industry players on other topics such as innovation, supply chain and global branding.

This report completes Phase 2, the labour market research phase of the sector project. Subsequent phases of the LMP will design strategies and implement solutions to reduce the impacts of the challenges identified herein.

In addition to thanking the federal and provincial governments, there are several people from industry and post-secondary who have lent many hours to the success of this project. The Steering Committee members have not only provided sound input and guidance, but have displayed significant passion and energy to ensure British Columbia has a thriving apparel design and manufacturing cluster.

Alan Yiu	Creative Director, *Westcomb Outwear*
Alex McAulay	Chief Financial Officer, *Garmatex Technologies Inc.*
Amy Frankel	General Counsel, *Aritzia*
Carolyn Robertson	Dean, Wilson School of Design, *Kwantlen Polytechnic University*
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Virginia Beltjens	CIO & Vice-President, Operations, *White House Design Company*

We would like to thank our two research partners, R.A. Malatest & Associates Ltd. and Gen Y Inc. in the production of this study.

The access that employers and educators granted was greatly appreciated. A big thanks to the dozens of firms, and hundreds of employees and students, who participated in the surveys to share their opinions and insights.

Last but not least, the project would not have been possible without the dedicated team at the BC Alliance for Manufacturing.

The results of this report not only demonstrate how important the apparel sector is to our province but also lays the foundation for implementing collaborative solutions in the months ahead so that the apparel sector can keep growing, more and more citizens find jobs, and our economy becomes more prosperous.

Sincerely,

Marcus Ewert-Johns
Chair,
BC Alliance for Manufacturing

Photo: Angela Fama
*VCC Fashion Arts (*Left to right): Annie Kuan, Jie Wei (Sherry) Chen, Samantha Stroman

EXECUTIVE SUMMARY

About this study

This report presents the key findings associated with the labour market information research completed for British Columbia's apparel manufacturing sector.
British Columbia's (BC) apparel sector is diverse and includes the sub-sectors of design, manufacturing, distribution and retail of clothing, footwear and certain accessories. The sector consists of an estimated 436 firms situated predominantly in the Mainland/Southwest economic development region and employs approximately 7,642 people in BC.

With the support of the Ministry of Jobs, Tourism and Skills Training,the BC Alliance for Manufacturing (BCAFM), initiated a Sector Labour Market Partnership (LMP) project in 2015 to address common workforce challenges in the apparel manufacturing sector. The goal of the second phase of the LMP, the content of this report, is to provide industry and government policy makers with current and accurate labour market data along with a profile of the British Columbia's apparel industry. This information is expected to better support the industry through addressing current and anticipated workforce gaps in the sector. The research includes an assessment of labour supply and demand, sector retention and attraction issues, training and education needs as well as other human resource issues facing the sector. The study incorporates a range of research activities including employer surveys and key informant interviews with stakeholders in both the industry and post-secondary institutions. Students and apparel companies employees were also surveyed to determine cultural fit and potential solutions to challenges around talent attraction efforts.

The key findings of the study are highlighted below.

There will be significant hiring requirements in the sector to fill new positions from anticipated growth and vacated positions from retirements and exits.

Over the next ten years, BC's apparel manufacturing sector will need to replace over 114% of its current workforce, representing 8,717 workers. Skilled labour shortages remain the most critical issue undermining competitive growth in the sector.

Over one-quarter (27%) of these new hires will be required to fill vacancies arising from retirement, and 42% will be new hires from projected growth, with the remaining 31% of new hires required to fill current vacancies and vacancies arising from worker turnover. Two-thirds (66%) of employers indicated that their workforce would increase by 2025 and identified the need to hire additional workers to meet increased demand/production requirements. Growth in the sector was found to be present across all sizes of firms (49% overall growth rate) with the largest companies in the province predominantly driving growth (88% growth rate).

Immigration and foreign worker recruitment must play a role in resolving significant labour shortages.

Growth in the apparel manufacturing sector has historically been stalled from a notable deficit of

skilled workers in the domestic labour market. Employers must be able to access all potential supplies of labour, including international ones. Currently less than one in 16 workers in the sector is foreign. Simplifying access to new foreign workers through more streamlined immigration procedures may be the only way to help the industry meet its potential. However, this process is currently incredibly complicated, not actively encouraged by governments, and ultimately a deterrent to most companies. With the number of foreign workers comprising such a small part of the workforce (6%) it would stand to reason that an influx of a modest number of immigrant workers would only benefit the province and facilitate growth within this sector. Often key roles are held by foreign workers in order to allow companies to develop the business growth that creates more positions for local British Columbians.

Some apparel manufacturing occupations will face even greater recruitment challenges.

Some occupations, primarily sewers, e-commerce professionals, designers and fit specialist engineers, are projected to require greater levels of replacement than others. These occupations are projected to need 145% to 164% of the current workforce to be replaced by 2025 if growth estimates are to be met.

The study explored nine key occupations that currently face vacancy rates ranging from 12% to 27%.

The industrial sewing occupation will suffer mostly from retirement as the average age of the workforce is greater than comparable occupations. In contrast, e-commerce and digital professionals will be lacking due to the significant growth projected for this occupation over the next ten years and the limited supply.

There is a great challenge in filling any senior position, requiring 10-plus years of experience, and that talent needs to be sourced from outside of Canada. This is especially important when sourcing executive and leadership positions.

Disconnect between apparel industry needs and current post-secondary curricula.

While BC has a large number, and significant variety, of post-secondary apparel and design programs available that have been developed with considerable input from industry leaders, there still remains a strong perception among employers that there is a gap between industry needs and the curricula of current programs.

Most notably is the absence of high school based programs to help focus those younger individuals who are interested early in a profession in the apparel industry. Also there are aspects of the educational sector that are unsatisfactory for the demands of the actual work performed. High growth companies are unable to grow organically simply using new graduate intake. Employers need to be able to gain skilled workers faster than a typical three to four year graduation cycle.

The apparel manufacturing sector is challenged in terms of effectively recruiting young people to the industry.

The youth values and expectations research suggests some level of opposition and disinterest toward the fashion and apparel industry due to limited awareness of what the industry can offer in terms of careers. This is a gap in communication that can be improved upon to promote the industry.

RECOMMENDATIONS

Based on a review of the market information collected as part of this study, as well as via the insights provided by key stakeholders, several broad recommendations have been presented with the goal of addressing the key human resource challenges facing the sector. These recommendations are explained more fully in Section 8 (Recommendations) of the report.

Develop a multipronged labour strategy to fill critical job vacancies and build a sustainable labour force

The industry faces significant workforce gaps that will hamper and restrain the strong growth the industry has been experiencing in recent years. Industry, collectively, will need to work collaboratively with government and post-secondary to address skilled labour challenges across a range of fronts. No one solution will have the impact that industry requires to be successful and a comprehensive multi-faceted approach will be required.

First, this will include developing a sustainable local workforce to ensure that sufficient labourers in the core and foundational trades and professional streams are available to fill vacant positions. This will also include simplifying pathways to attract leadership talent so that companies can continue their expansion growth.

Second, employers will need to engage in a more coordinated fashion with post-secondary to ensure that curricula and training regimes are regularly updated to meet current and future industry demands. This means improving communication flow so that existing resources are deployed appropriately and investments in new resources are targeted and meaningful.

Third, Immigration needs to be viewed as a tool to be used by employers. The province is facing upwards of 1 million job openings by 2025 across all industries. A global economy means that labour will need to flow more freely so that companies do not lose their competitive edge and are able to remain in British Columbia and contribute to our prosperity.

Fourth, industry needs to find ways to engage under-represented groups so they consider careers in the apparel workforce. Stereotypes needs to be challenged and a more accurate depiction of apparel related careers needs to be shared with students, parents and other influencers.
Older workers and retirees need to be engaged so that knowledge transfer occurs and expertise is not lost from one generation to the next.

Fifth, industry needs to coordinate itself so there is a central single point of service to lead initiatives and coordinate efforts. This will ensure that the collaboration to date continues its momentum and can be built upon to mutual success.

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BACKGROUND

SECTION 1: BACKGROUND

1.1 Critical Issues for the Apparel Sector of BC

In 2015, the BC Alliance for Manufacturing (BCAFM), with the support of the Ministry of Jobs, Tourism and Skills Training, initiated a Sector Labour Market Partnership (LMP) project to address common workforce challenges in the apparel manufacturing sector. The second phase of the project, the labour market information (LMI) phase, has a goal to provide industry and government policy makers with current and accurate labour market data. It is expected that this information will better support the industry through addressing current and anticipated workforce gaps in the sector. Some of the unique challenges that the apparel manufacturing sector faces are detailed under the subsequent headings.

1.1.1 Limited Data

There is limited statistical data available for the apparel industry within BC, despite the fact that it is the fourth largest[1] component of manufacturing in BC. Most of the available labour market information is anecdotal or inaccurate.[2] This issue is intensified by the fact that design-based jobs are generally counted employment for other sectors and not in manufacturing. Furthermore, full statistical data on the sector is not always reported, as this information is considered competitive in nature and therefore companies have incentive to keep the data confidential leading to much of the data collected by Statistics Canada being suppressed.[3] For governments to implement policy and programs to help the apparel industry become more competitive a solid data set is required. This is the rationale for this report.

1.1.2 Limited Industry Coordination

Presently no apparel industry organization exists; therefore there has been limited coordination across the sector. This limits the sector's ability to effectively and collaboratively respond to labour market trends and gaps.[4] The BC Alliance for Manufacturing has been filling this gap to help organize the industry. The Alliance is also acting as an incubator for a nascent apparel-focused industry association.

1.1.3 Labour and Skills Shortages

Employers within the apparel manufacturing sector perceive labour and skills shortages across leadership, professional and skilled trade occupations to be the largest barrier to growth of the sector. According to the Phase 1: Apparel Sector Report, BC apparel

[1] BC Stats, Apparel Industry Employers Survey 2016
[2] British Columbia Apparel Industry Labour Market Partnership Phase 1: Apparel Sector Engagement. Dec 2015 PDF file.
[3] British Columbia Apparel Industry Labour Market Partnership Phase 1: Apparel Sector Engagement. Dec 2015 PDF file.
[4] Ibid.

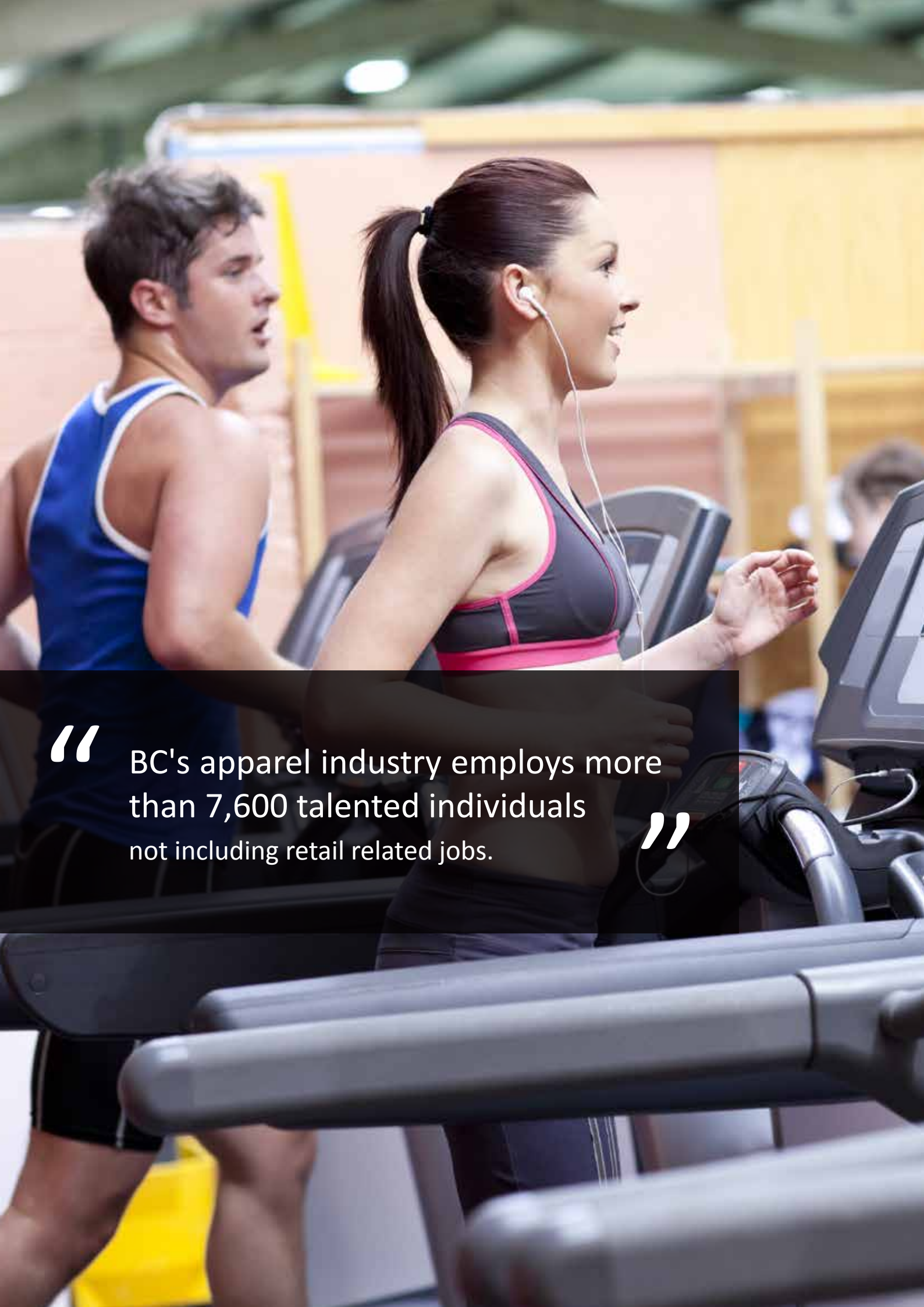
businesses experienced significant growth in the last five years and has consequently exhausted local labour supply. Current workforce constraints are slowing expansion plans and rejecting large client orders because employees lack the skilled labour capacity necessary for growth. Potential solutions to this challenge include:

- attracting international labour through immigration;
- attracting out-of-province labour through domestic in-migration;
- promoting the sector's attractiveness to young workers and youth considering their education and career options; and
- other strategies.

1.1.4 Skills Development

Within the apparel manufacturing sector there is the view that there are insufficient graduates from educational institutions with the required knowledge to fill the large number of highly skilled job vacancies. Furthermore, employers believe there is poor alignment between education provided by local post-secondary institutions and training required by employers.

Post-secondary institutions are seeking to tailor their training programs to better meet industry needs, but require current information as to which skills are in high-demand and what positions need to be filled presently and in the near future.



“ BC's apparel industry employs more than 7,600 talented individuals ”

not including retail related jobs.

2

METHODOLOGY

SECTION 2: METHODOLOGY

2.1 Research Objectives

This project had a number of goals which included:

- develop a comprehensive profile of the BC apparel sector identifying type and location of products manufactured, general revenue, and labour force size;
- identify the current and future province-wide occupational level demands;
- analyze skills shortages and gaps;
- investigate educational institutions training workers for the industry within and outside the province;
- identify youth engagement challenges that undermine recruitment to the sector;
- identify best practices in comparable apparel manufacturing jurisdictions; and
- provide a series of applicable recommendations to address the human resource issues identified through the research.

The scope of the research focused on the BC apparel subsector defined as:

> "BC-based apparel, footwear and accessories firms conducting value-added activities locally such as innovation, design, and engineering, sourcing, product development, quality control, marketing, technology, distribution and logistics. This can include manufacturing and their own retail, e-commerce and/or whole operations."[5]

Solely retail-focused businesses were excluded from the analysis.

2.1.1 Research Firms

Two research firms were contracted to support this project.

R.A. Malatest & Associates Ltd. (Malatest) was retained to identify labour and skills pressures limiting the growth of BC's apparel sector and to build a better profile of the industry. They conducted a comprehensive survey along with informant interviews.

To complement the research conducted by Malatest regarding current and predicted future hiring trends and labour market needs among apparel firms, the Alliance contracted Gen Y Inc. to conduct research into two aspects of the supply side of the labour market: current

[5] *British Columbia Apparel Industry Labour Market Partnership Phase 1: Apparel Sector Engagement.* Dec 2015 PDF file.

employees in the apparel sector, and high school students' values and expectations for their future careers.

2.1.2 Detailed Methodology

For a detailed methodology please see Appendix B of this report. The detailed methodology includes specified, in-depth information on the:

- B.2 Industry Profile
- B.3 Key Occupational Groups
- B.4 Employer Survey
  - B.4.1. Development of Data Collection Instruments
- B.5 Gen Y Inc. Research
  - B.5.1 Student Survey and Focus Groups
  - B.5.2 Employee Survey
- B.6 Development of Sample List
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- B.8 Survey Data Expansion
  - B.8.2 Caveats
- B.9 Key Informant Interviews
  - B.9.1 Recruitment
  - B.9.2 Interview Guides
  - B.9.3 Interview Completions
- B.10 Investigation of Relevant Educational Institutions and Programs, in BC and Elsewhere
- B.11 Comparative Analysis of Best Practices Involving Government Interventions in Other Jurisdictions

INDUSTRY STORIES

FULL OF BEAUTIFUL SURPRISES

BC's apparel cluster is not just dominated by big brand apparel. The industry is full of world-leading boutique businesses that have found niches in premium and performance apparel.

The Sky is the Limit

Vladimir Rincon, or Vlady as he prefers to be called, is an adrenaline junky who likes to be his own boss. For years, he was a skydiving instructor travelling North America. Then, he met Sandra Dussault, who shared his passion for the sport. It was this passion for skydiving and a keen eye noting an increasing interest for the sport that pushed Vlady and Sandra to start making custom skydiving suits in their Burnaby basement back in 2006. Of course, it didn't hurt that Vlady has an entrepreneurial dad. Today, their company, Vertical Suits, makes high-end, custom skydiving and wind tunnel suits out of its Pitt Meadows, BC facility, and is the preferred vendor for iFly. iFly builds and operates wind tunnel facilities globally. "It's actually a really booming industry," Sandra said of Vertical Suits. One issue clipping its wings to higher growth – there is only two sewers skilled enough to make these high-performance suits. The company is currently training 8 new sewers and could easily hire several more to keep up with demand.

A change of heart

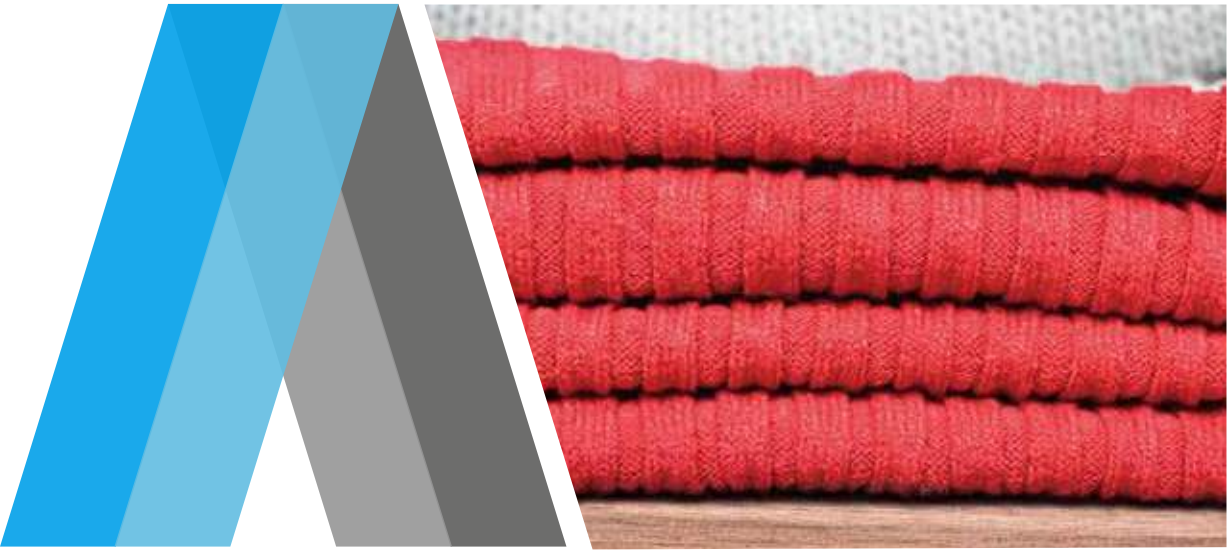
Daughter of a dentist dad and a nurse mum, Nicole Bridger aspired to be a vet. She was 13, studied biology, and picked up sewing just as a hobby. Then, she met her first love Adrian and had a change of heart. Adrian's father is the famous shoe designer John Fluevog. In her words, "John was like a second father" and his passion for his craft showed the teenager that she could do what she loved doing and make a career out of it. When John Fluevog took her to Vivienne Westwood's store in New York, she was floored. "At 16, I decided that I wanted to have my own clothing line and my own retail shops," she said. Serendipitously, she interned with Vivienne Westwood in London and had Chip Wilson as her mentor. In 2011, Nicole Bridger opened her first store in Kitsilano. Ethically made merchandise has always been her ethos. Today, Nicole Bridger has more than 20 employees and a steady following of world-famous customers.

Creating a new passion

Patricia Fieldwalker wanted to wear a silk and lace camisole under her suit to attend a play. But this was Vancouver in the 1980s and nothing like that was available. So, she sewed herself one and shocked her husband as it was deemed "so cheeky at the time." Little did she know, she had started a trend and, soon, other women were asking to have similar camisoles made. Today, Patricia Fieldwalker is a renowned, Vancouver-based luxury lingerie designer. Her lingerie has been featured in major films, such as Pretty Woman and Fatal Attraction, and worn by Hollywood A-listers like Demi Moore, Michelle Pfeifer, Julia Roberts, Naomi Watts and Julianna Margulies. An avid gardener, Patricia Fieldwalker said that the beautiful flowers in her yard continue to inspire her designs each day. All of her lingerie is still made in Vancouver, BC.

Photo: Vertical Suits

> The apparel industry is the fourth largest component of BC's manufacturing cluster.



3

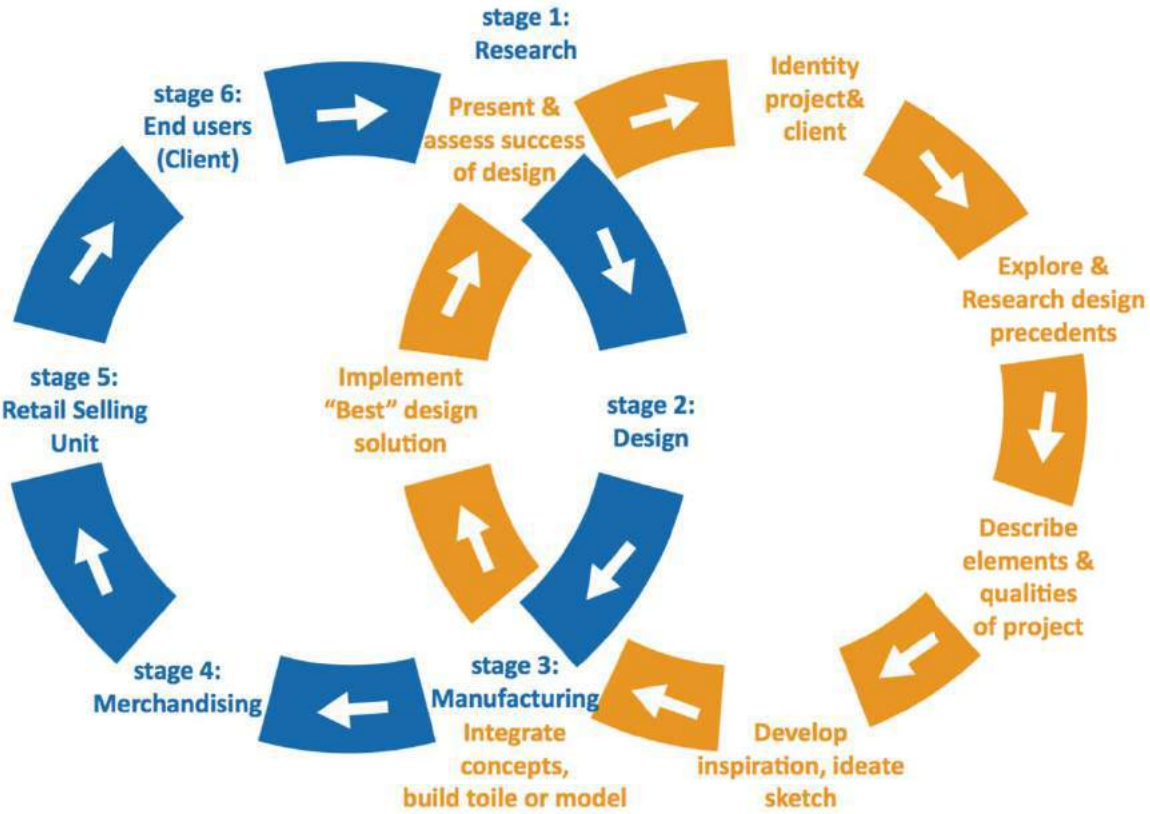
MARKET OVERVIEW

SECTION 3: INDUSTRY PROFILE

3.1 Overview

The employer survey, key informant interviews, and some secondary data (e.g., National Household Survey (NHS), Survey of Employment, Payrolls and Hours (SEPH), Canadian Business Patterns) were used to compile an overall profile of the apparel industry in BC. This profile includes a snapshot of the current number and size of apparel firms in BC, their distribution across the province by focus and product as well as current and future revenue.

The scope of the research is based on the definition of the BC-based apparel sub-sector used for this study, namely: apparel, footwear and accessories firms conducting value-added activities locally such as innovation, design, and engineering, sourcing, product development, quality control, marketing, technology, distribution and logistics. This can include manufacturing and their own retail, e-commerce and/or whole operations.



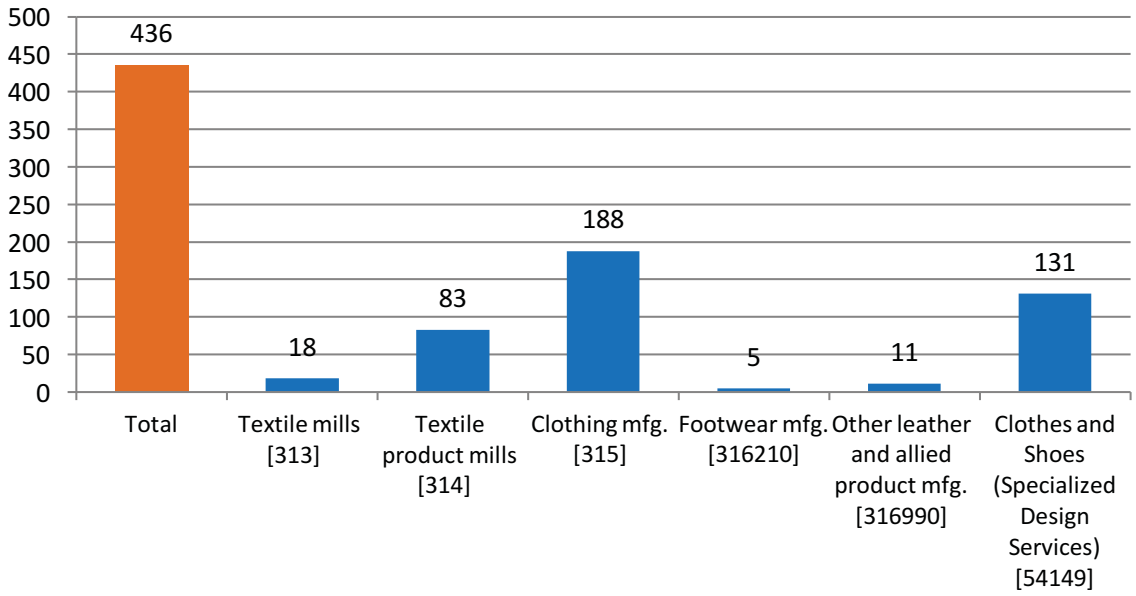
For further clarity the following North American Industry Classification System (NAICS) codes were used to focus the project:

- 315 - Clothing Manufacturing
  - 3151—Clothing Knitting Mills
  - 3152—Cut and Sew Clothing Manufacturing
  - 3159—Clothing Accessories and Other Clothing Manufacturing
- 313 - Textile Mills[6]
- 314 - Textile Products[7]
- 316210 - Footwear Manufacturing
- 316990 - Other Leather (luggage, handbags, purses, wallets)
- 54149 - Clothes and Shoes (Specialized Design Services)

3.1.1 Firm Characteristics

The BC apparel industry is diverse in terms of both subsector and size of firms. Due to the nature of this study only firms that conduct value-added activities locally are included. As shown in Figure 3.1 below, 436 businesses fall into these categories as provided by Canadian Business Patterns Data.

Figure 3.1: Number of Firms in BC by NAICS Code



Source: Canadian Business Patterns 2016, 2011 NHS, 2016 SEPH

[6] 313 – Textile Mills: Companies classified in this NAICS category do not produce clothing and are historically known for producing fabric. But many of these companies also fabricate textiles into non-apparel products and compete directly for the same employees.

[7] 314 Textile Products: While companies that fall under this industry category generally do not produce clothing, they produce accessories and utilize many of the same occupations to produce products from fabric. These companies compete directly for the same employees.

Table 3.1 details the number of companies by NAICS code by size of business using the five range categories. For additional analysis employed in this study the lower categories will be combined as 1-19. This is detailed in the Appendix B.8 (Survey Data Expansion) in the methodology.

Over half of all firms employ between one and four employees. Only 11 of those firms employ between 100 and 499 employees, and three employ 500 or more. While Canadian Business Patterns classifies companies based on what is assumed to be their predominant focus many companies are diversified across manufacturing and design. More detailed analysis of this topic is undertaken in the following charts and tables.

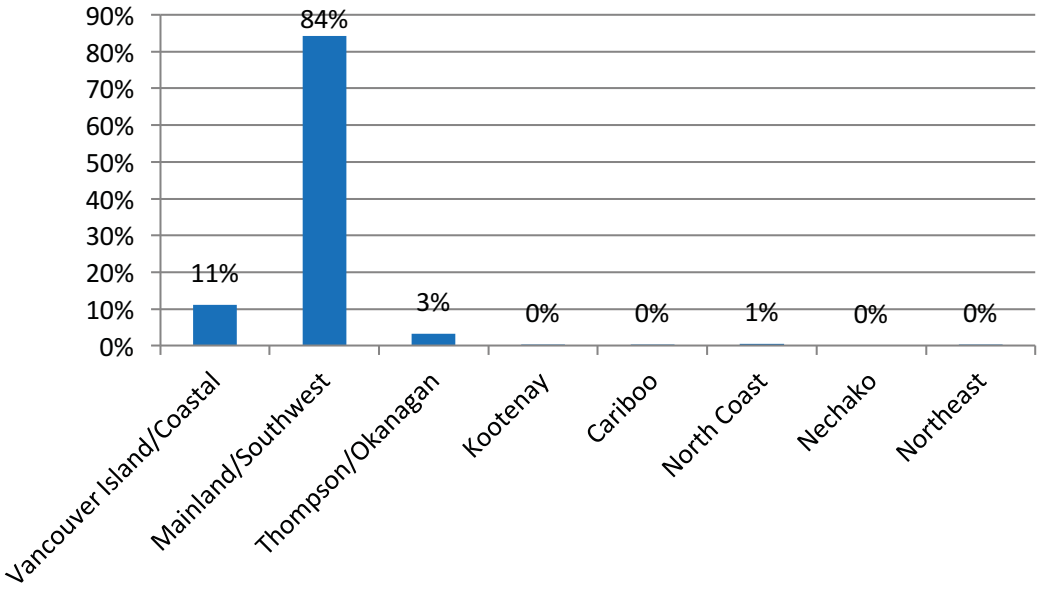
Table 3.1: Number of Firms in BC by NAICS by Size Category

North American Industry Classification System (NAICS)	Number of businesses by size (# of employees)					
	1 to 4	5 to 19	20 to 99	100 to 599	500 plus	Total
Manufacturing and Design						
Textile mills [313]	7	10	1	0	0	18
Textile product mills [314]	36	35	12	0	0	83
Clothing manufacturing [315]	102	55	25	3	3	188
Footwear manufacturing [316210]	0	2	1	2	0	5
Other leather and allied product manufacturing [316990]	8	1	0	2	0	11
Clothes and Shoes (Specialized Design Services) [54149]	114	12	1	4	0	131
Total	**267**	**115**	**40**	**11**	**3**	**436**

Source: Canadian Business Patterns 2016, 2011 NHS, 2016 SEPH

When looking at the distribution of firms across economic development regions in Figure 3.2 it becomes quickly evident that the great majority (84%) of businesses are located in the Mainland/Southwest region of the province. All other economic development regions apart from Vancouver Island/Coastal (11%) and Thompson/Okanagan (3%) have negligible or no representation by the industry.

Figure 3.2: Distribution of Firms in BC by Geography

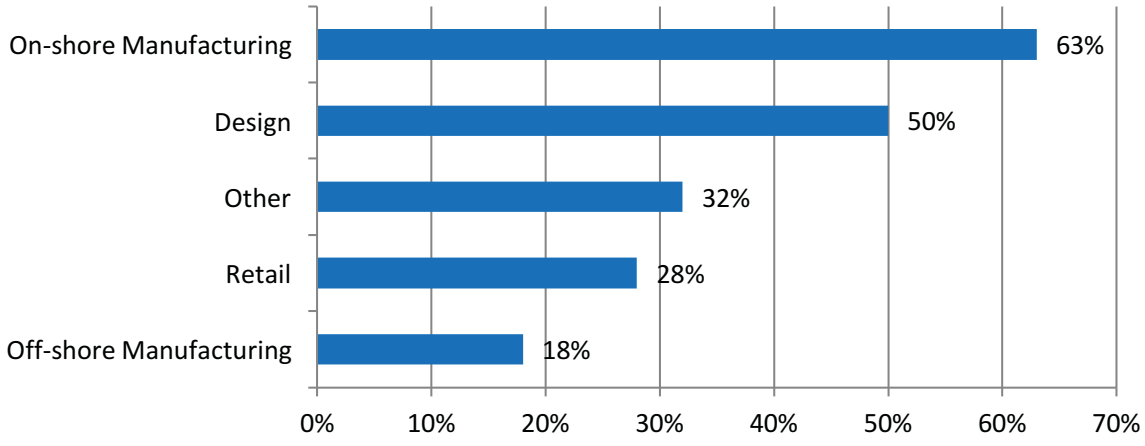


Source: Apparel Industry Employer Survey 2016 and Canadian Business Patterns 2016

The percentage of firms that are involved in the following activities is shown: Design, Off-shore Manufacturing, On-shore Manufacturing, Retail and Other is shown in Figure 3.3. The categories are not mutually exclusive and if a business is involved in more than one activity they were accounted for in the proportions of both.

Overall 63% of businesses in the province are involved in On-Shore Manufacturing with half of the businesses involved with Design. The most common 'Other' response was wholesale.

Figure 3.3: Distribution of Firms in BC by Focus*



Source: Apparel Industry Employer Survey 2016 and Canadian Business Patterns 2016
*Percentages will add to greater than 100% due to multiple responses

In Table 3.2 a cross-examination of company focus by economic development region is shown. While On-shore manufacturing, Retail and Other generally track the overall distribution in the major regions of Vancouver Island/Coastal and Mainland/Southwest, there is a marked difference in the proportion of firms that perform design and offshore manufacturing between the two.

Over half (54%) of the firms on the Mainland include design as one of their focuses compared to only 38% for Vancouver Island/Coastal. Also, nearly one quarter (22%) of firms in the Mainland/Southwest region use some kind of offshore manufacturing while only 10% of Vancouver Island/Coastal companies do.

Table 3.2: Distribution of firms by Region by Focus*

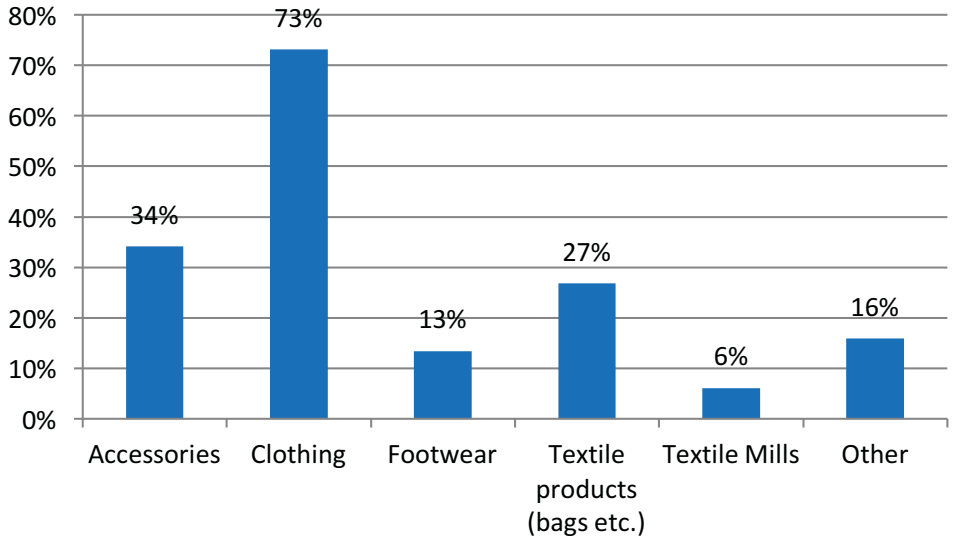
Region	Design	Off-shore Manufacturing	On-shore Manufacturing	Retail	Other
Vancouver Island/Coastal	38%	10%	62%	24%	33%
Mainland/Southwest	54%	22%	63%	31%	31%
Thompson/Okanagan	50%	0%	100%	0%	50%
Kootenay	0%	0%	0%	0%	0%
Cariboo	0%	0%	0%	0%	0%
North Coast	0%	0%	0%	0%	0%
Nechako	0%	0%	0%	0%	0%
Northeast	0%	0%	0%	0%	0%
Total	**50%**	**18%**	**63%**	**28%**	**32%**

Source: Apparel Industry Employer Survey 2016 and Canadian Business Patterns 2016
*Percentages will add to greater than 100% due to multiple responses

Highlighted in Figure 3.4 are the key product lines for the firms in BC's apparel sector. The products are not mutually exclusive and a business can be involved in the production of multiple products and be accounted for in more than one category.

Almost three-quarters (73%) of apparel manufacturing businesses in BC produce clothing, with 34% producing accessories and 27% producing textile products. Only 13% of companies in BC manufacture footwear and even fewer (6%) are classified as textile mills.

Figure 3.4: Proportion of Firms in BC by Product(s)*



Source: Apparel Industry Employer Survey 2016
*Percentages will add to greater than 100% due to multiple responses

3.1.2 Focus by Size

Key informant interviews suggest that the largest companies in the industry are vertically integrated firms which design, manufacture (through a variety of in-house, contracted local, and contracted overseas factories), and retail or wholesale their branded products either through their own retail sites (e.g., Arc'teryx, Aritzia, Lululemon and MEC) or through other retailers. These integrated firms tend to employ large numbers of employees (>500).

Firms which focus on either manufacturing or design (retail-only firms were not interviewed for this project) tend to be smaller, employing fewer than 50 people. Length of time in business ranged from less than 10 years to over 35 years. All of these smaller designers and manufacturers were locally owned (i.e., not owned by a larger parent corporation). Design firms tended to focus on a specific category of apparel (e.g., fashion, performance athletic wear, footwear), whereas manufacturing firms were more likely to be generalist and able to take on contract work for a variety of garment types.

3.1.3 Focus by Type

A substantial portion of the key informant firms interviewed throughout this project focused on technical, athletic, performance, or "athleisure" wear. This focus tended to cut across firm size and type; there were large, vertically integrated firms with this focus, as well as smaller designer-manufacturers and third-party designers.

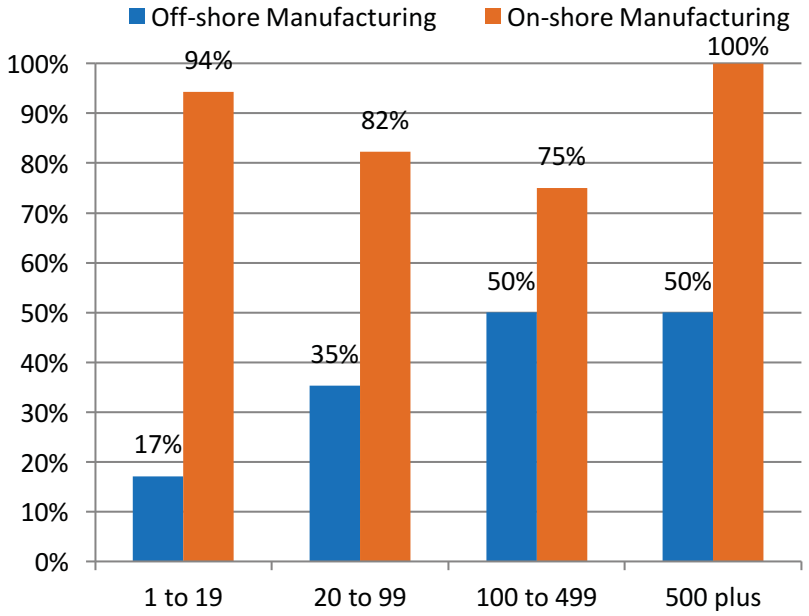
The next-most common product category among key informant interviewees was fashion, particularly women's fashion apparel. These firms tended to have some vertical integration, although not necessarily complete integration (e.g., some designed and manufactured but

did not retail, some did all three). Remaining firms interviewed for this project specialized in industrial garments.[8]

3.1.4 Manufacturing Locations

A minority of the firms interviewed for this project manufactured their products exclusively overseas; there were several additional firms which manufactured their products at a mix of overseas and local locations. It should be noted that those which manufactured (even some of) their products overseas tended to be large firms that produced an outsized share of apparel-sector GDP. Most firms manufactured locally, either in-house or through contracting with third-party manufacturers. These tended to be small or mid-size apparel firms. Figure 3.5shows the distribution of firms who do either offshore or on-shore manufacturing.

Figure 3.5: Proportion of Firms in BC who do On-shore or Off-shore Manufacturing by Size*



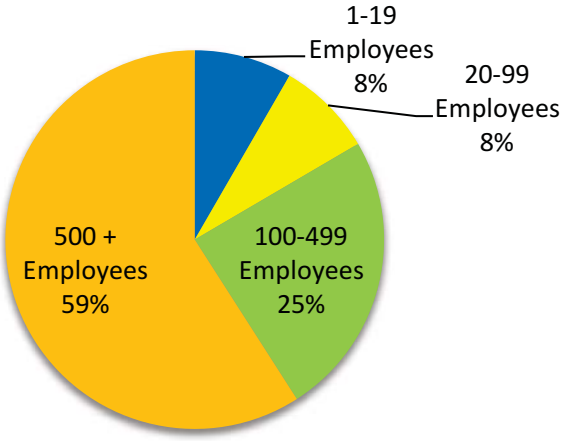
Source: Apparel Industry Employer Survey 2016
*Percentages will add to greater than 100% due to multiple responses

3.1.5 Financial Analysis

Estimated total sales revenue for the BC apparel manufacturing sector is approximately $3,787 billion. Figure 3.6 represents the distribution of total sales revenue by firm size. The greatest proportion of revenue is attributed to the largest (500+ employees) firms, who account for 59% of total sales revenue.

[8] Source: Apparel Industry Key Informant and Stakeholder Interviews

Figure 3.6: Distribution of Provincial Sales Revenue by Size of Company



Source: Apparel Industry Employer Survey 2016

By sales contribution this would place apparel manufacturing in the top 5 sub-sectors that comprise BC's manufacturing industry.

Table 3.3: Top 5 BC Manufacturing Sub-Sectors by Sales

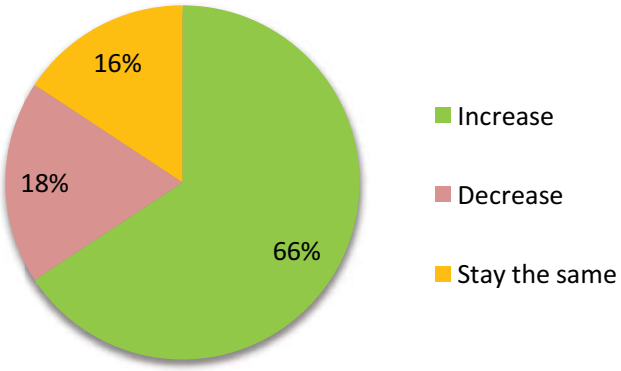
Ranking	Sub-Sector	Annual Sales (2015)	Est. % of Manufacturing Sales
1.	Food and Beverage Manufacturing	$ 9,100,000	21.0%
2.	Value Added Wood Manufacturing	$ 8,600,000	19.8%
3.	Paper Manufacturing	$ 4,500,000	10.3%
4.	Apparel Manufacturing	$ 3,700,000	8.5%
5.	Machinery Manufacturing	$ 2,500,000	5.7%

Source: Statistics Canada, CANSIM Table 304-0015, Manufacturing Shipments by Industry NAICS, Apparel Industry Employer Survey 2016

3.1.6 Employer Outlook and Market Trends

Employers who responded to the survey, as well as many employers who participated in key informant interviews, tended to have optimistic outlooks for the future. A large majority (66%) of survey respondents anticipated that their workforces would grow by 2025, with only 16% believing their workforces would remain the same, and 18% believing it would decrease. This supports the anticipated growth forecasted in the workforce composition and projections Section 4 (Industry Workforce).

Figure 3.7: Employer outlook on workforce growth by 2025



Source: Apparel Industry Employer Survey 2016, n=70

Large, vertically integrated firms, as well as mid-size employers focusing on design, that participated in interviews also tended to believe they would see continued growth over the next 10 years. One interviewee noted that most firms are currently very bullish about their companies' respective futures, but believed that this level of growth in the industry is not sustainable for all firms in BC – at some point there will be some 'pruning back' due to competition.

It is important to note that, Lululemon one of the larger apparel firms based in British Columbia has publically declared that they will **double sales** to $4.0 billion by 2020, push innovation in new product categories such as swimwear and menswear, add more physical retail stores and increase e-commerce sales infrastructure.

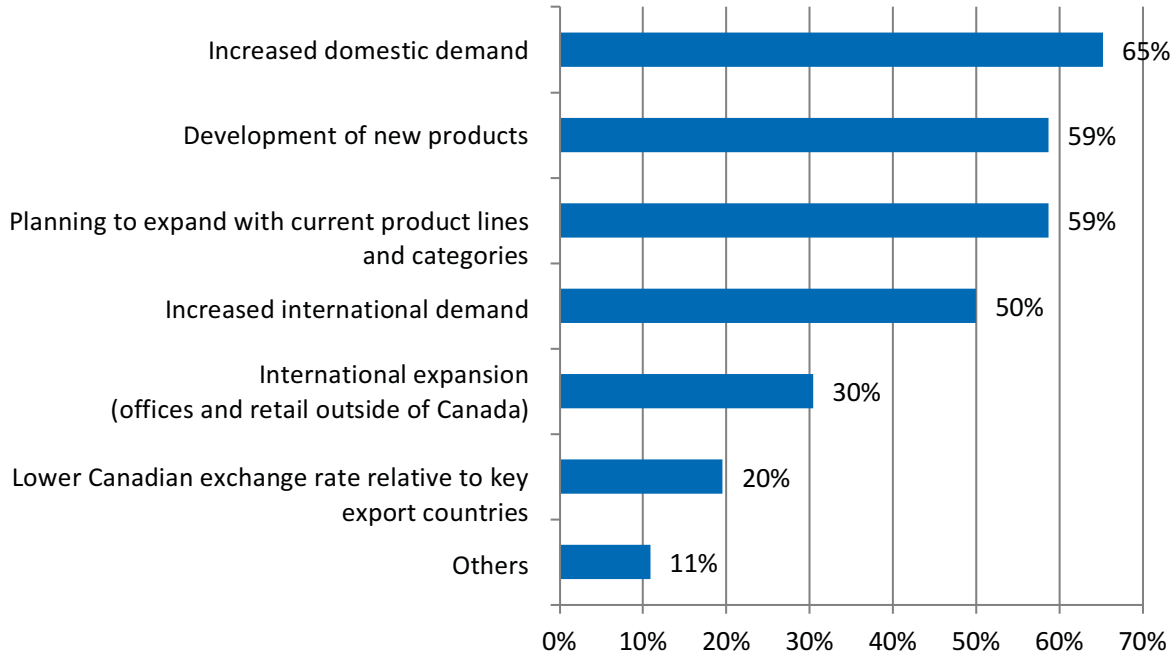
Manufacturing firms were less uniformly optimistic about the future of their workforces. Some believed that their workforces would either remain the same or increase; these expectations were founded on perceived consumer trends for ethical sourcing and manufacturing, especially locally made and made-in-Canada products. Some other companies were less optimistic, believing that their workforces would shrink substantially over the next 10 years. This outlook on their companies' futures was fuelled by the belief that the available pool of skilled cutters, sewers and other production workers would continue to shrink. These organizations believed that this inability to hire workers would result in their companies being less competitive with off-shore manufacturers due to their inability to take on large contracts, and ultimately make on-shore manufacturing in BC untenable over the long term.

Follow up questions probed what factors employers believed would contribute to these changes. Summaries of responses to these questions are depicted in Figure 3.8 and Figure 3.9 below.

3.1.7 Trends and Skills Pressures Potentially Boosting Growth

The largest contributing factor that employers believed would play a role in their companies' respective growth was an expectation of increased domestic demand. Nearly two-thirds (65%) of companies anticipating growth in the next ten years stated that this was expected to be a factor in their growth. Further, half of these companies (50%) anticipating growth stated that increased international demand would also play a role in their companies' expansion. Key informant interviews supported this finding of optimism regarding demand for apparel firms' products. In particular, interviewees tended to note consumer demand for Canadian-made or North American-made products as a trend that will increase, due to public expectation that these products are made under less exploitative conditions than those found in garment factories overseas.

Figure 3.8: Factors employers believe will contribute to business expansion



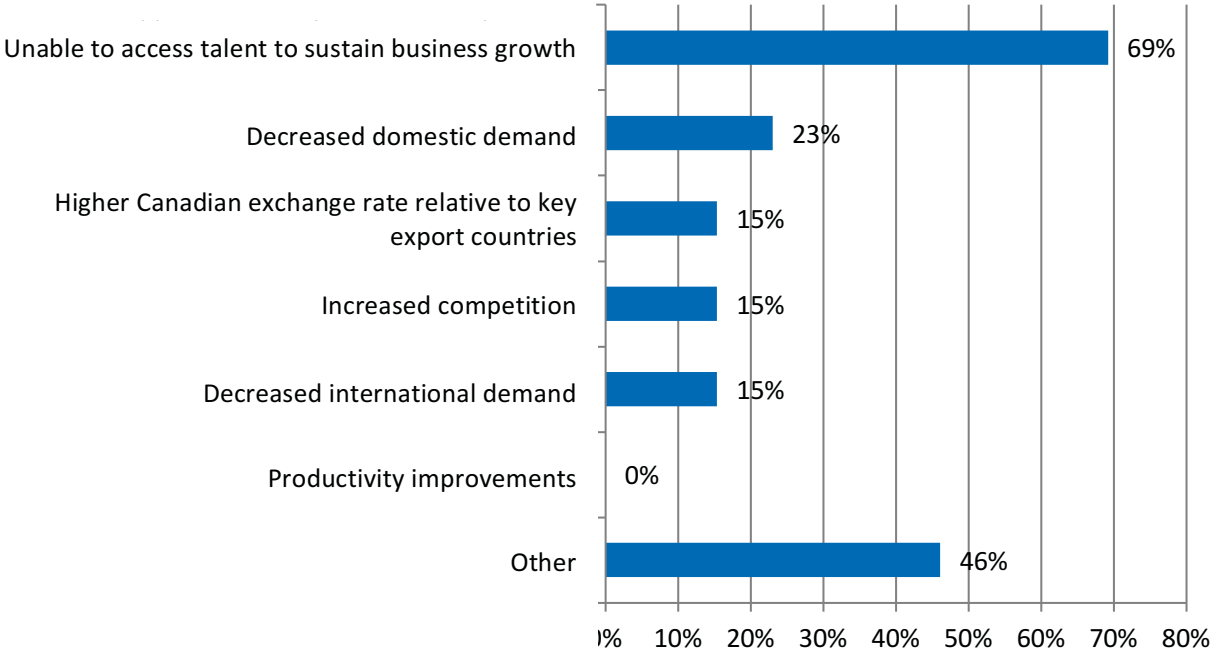
Source: Apparel Industry Employer Survey 2016, n=46

Interestingly, 59% of employers anticipating growth believed that each of "Development of new products" and "Planning to expand with product lines and categories" would also contribute to their growth. This suggests that firms are optimistic that new consumer demand can be generated through innovation, developing and offering new products on the market, rather than simply responding to consumer demand as it currently exists.

3.1.8 Trends and Skills Pressures Potentially Limiting Growth

Employers who stated in the survey that they expected to see a decrease in the size of their workforce over the next ten years were asked what factors they believe will contribute to this predicted decrease. **0** shows a breakdown of how frequently employers selected each of these factors as limiting growth of their companies in the near future. Some caution should be exercised in the interpretation of this data given very few (13) employers envisioned a reduction in the size of their workforce.

Figure 3.9: Factors employers believe will contribute to a decrease



Source: Apparel Industry Employer Survey 2016, n=13

By far, the most frequently cited limiting factor to company's growth was an expectation that they would not be able to hire sufficient talent to sustain their businesses. It should also be noted that the majority of open-ended follow-up responses under the "Other" category cited aging baby boomers, retirements, and shortage of skilled workers as significant limiting factors, which overall is conceptually very similar to "Unable to access talent to sustain business growth". This finding was corroborated in key informant interviews with employers.

Interviewees from a variety of firms identified two distinct trends, both shortages, in the labour market.

The first shortage is a shortage of highly skilled, experienced executives and product design and development leads. Larger, vertically integrated firms tended to note that there was not enough local talent to fill needed positions in higher-level executive, management, and

design lead positions. These positions typically required between 10 to 15 years of experience, and a particular background or skill in business management within the apparel industry rather than a singular focus on product design or construction. Firms that noted shortages of talent for these positions did not point to any particular gap in available education and training programs as being responsible for this shortfall; interviewees instead emphasized that the industry and their businesses are currently growing so rapidly that the local labour market simply cannot "organically" keep up by hiring entry-level candidates and promoting from within.

These large firms noted that their competitive edge in the market is predicated on their ability to develop and deliver innovative and high performing apparel. Their ability to develop these products relies heavily on bringing in world-class talent with business acumen and considerable experience in the global apparel industry (especially from multi-national apparel firms such as Nike, Adidas, Patagonia, Columbia, Zara and others). In some cases, because of immigration-related challenges and frustrations, newly hired executives have had to be set-up in offices in other countries where they could perform their duties remotely.

The second shortage noted by interviewees is a serious deficit of skilled industrial sewers to fill manufacturing positions in local factories. Interviewees noted an aging workforce, with large numbers of retirements expected in the next 10 to 15 years, and few younger workers in these positions to fill the expected demand. The shortage of skilled sewers was identified as the major workforce challenge by the small- and medium-sized firms interviewed. This problem was noted by both manufacturers who directly employ sewers, and by designers who rely on contracted manufacturing with local factories.

Manufacturers noted that their ability to take on contract work was directly limited by the number of sewers they have; one interviewee noted that he has an additional room of cutting and sewing machines that are currently sitting unused due to a lack of sewers and cutters to fill the positions.

Designers noted that they have had challenges finding a domestic factory with capacity to take on their work, due to the shortage of sewers, and anticipate that continued shortage of sewers in the Lower Mainland could have a significant limiting impact on the number of lines they are able to produce in a season. This, in turn, could have an impact on the number of designers, fit specialists and other design-level positions that these firms need to fill.

Both examples reinforce that challenges faced by industry and the potential for design and manufacturing jobs to be relocated elsewhere.

INDUSTRY STORIES

BOOTSTRAPS TO SUCCESS

"Now, THIS is a shoe!" he proclaimed as he pushed aside the dessert plate and proudly displayed his 20-year-old Dayton shoe on the dinner table. Rarely was Will ever so enthusiastic about fashion. According to Will, these hand-stitched Daytons were $600. But! Amortized over 20 years, the cost per wear is much lower than the average $150 pair of mass manufactured shoe that last all but two-three years. And! The environmental footprint cradle to grave is much smaller. Of course, Will is an engineer.

Dayton Boots Brand is an old establishment that has been making quality shoes and boots here in British Columbia for 70 years. Every pair is made with the same painstaking, labour-intensive ways as days of yore. The upper part of the shoe is hand sewn end-to-end, stretched over a last for hours before the welt is stitched on. What started as a logger boot maker is now a hallmark of bespoke footwear with a steady following of ardent customers like Will. The company has a pipeline of 5,000 – 10,000 orders each year and ships to 20 countries. But fulfilling these is increasingly difficult as older employees retire and new, highly skilled craftspeople are hard to find. An entire floor at Dayton's factory that used to be occupied by sewers is now nearly empty.

Like Dayton Boots, Viberg Boots is another old British Columbia footwear company that still makes all its shoes and boots by hand locally. When Brett Viberg took over the company in 2008, he had the unenviable task to bolster sales. Instead of chasing the cheaper needle and moving production offshore, his family pride prevailed and he stayed local. Viberg Boots pivoted from selling work boots to loggers and welders to high-end footwear sold in exclusive boutiques around the world. Sales have risen since but further growth is stymied by a lack of skilled craftsperson.

Dayton Boots and Viberg Boots are just two of British Columbia's apparel and footwear makers that feel the frustration of a lack of skilled labour that's limiting their growth. Staunch believers in quality, these companies have built a good following of customers despite their relatively high sticker prices. There is demand for quality and the willingness to pay for such. Yet, without access to suitably skilled labour, their production can only plateau.

Photo: Dayton Boots

> BC's apparel companies are investing in their retail workforce to assume future leadership, design and corporate roles.

4

INDUSTRY WORKFORCE & PROJECTED DEMAND

SECTION 4: INDUSTRY WORKFORCE

A key element of the Labour Market Information Research Study was to develop a comprehensive profile of BC's apparel manufacturing workforce, including analysis of the workforce by general occupational category (Executive and Leadership, Mid-level Technical Skilled Labour, Specialized Skills and Trades, Other Staff), and across the key occupations.

While the general occupation categories are approximately derived from the NOC skill level classification system[9], there was a perceived inaccurate devaluing of the skill required for core apparel manufacturing functions during consultation with working groups during Phase 1 of the project[10]. Irrespective of the role performed, all the jobs in the apparel workforce demand advanced skills and significant periods of experience.

Examples of the type of apparel industry specific occupations the general occupation categories represent and their associated NOC skill level are as follows:

- Executive and Leadership Level (NOC Skill Level 0)
  - C-Suite Executives
  - Business Unit / Division Heads (VPs)
- Mid-level Technical Skilled Labour (NOC Skill Level A/B)
  - Senior Managers (Directors)
  - Designers
  - Technical Designers / Product Engineers
  - IT / E-commerce
  - Marketing / PR
  - Buyers
- Specialized Skills and Trades (NOC Skill Level C/D)
  - Sewers
  - Cutters
  - Pattern Makers
  - Machine operators
  - Traffic
- Other staff (support and/or other) (NOC Skill Level Varied)
  - Corporate Services (HR, Finance)
  - Administrative Support (Clerks) and Customer Service

[9] Government of Canada. National Occupational Matrix 2011. Retrieved August 8, 2016, from http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/html/Matrix.html

[10]. British Columbia Apparel Industry Labour Market Partnership Phase 1: Apparel Sector Engagement. Dec 2015 PDF file.

The industry sectors of the BC workforce utilized for this analysis include the following NAICS categories:

- Textile mills [313]
- Textile product mills [314]
- Clothing manufacturing. [315]
- Footwear manufacturing. [316210]
- Other leather and allied product manufacturing. [316990]
- Clothes and Shoes (Specialized Design Services) [54149]

Excluded were retail only firms and firms that do not fall under the definition of manufacturing for this study (i.e. *manufactured is where goods are designed, created, cut, sewn or produced*).

Also analyzed was the growth of the workforce based on projections made by companies in the industry. This allowed for accurate predictions of future employee demand based on vacancies, growth, retirement and attrition. The study also collected important demographic information about the workforce, including the age distribution of workers, and the proportion of workers that were male or female. Given that information was supplied by apparel industry employers representing over half of the industry workforce and based on their knowledge of the future of their company, it should be emphasized that the workforce profile detailed in this section of the report should be viewed as a very representative portrayal of the sector.

Interspersed throughout the section is analysis from supporting methods including analysis of key informant interviews. The interviews provide additional context to the workforce projections from the perspective of major stakeholders in the industry.

Information in this section is presented as follows:

- Current Industry Workforce
- Projected Industry Workforce
- Current Vacancy Rate
- Projected Retirements
- Turnover
- Workforce Demand
- Industry Employment Projection

4.1 Current BC Industry Workforce

Employers were asked to provide an inventory of their current workforce by general occupational classifications of Executive and Leadership, Mid-level Technical Skilled Labour, Specialized Skills and Trades as well as Other Staff. Using developed expansion factors, it was possible to provide an estimate of the overall size of the sector.

Across the four general categories, the BC Apparel Manufacturing industry employs an estimated 7,642 people.

Table 4.4: Current BC Industry Workforce by General Occupational Category

General Occupational Category	Current Industry Workforce*	Percent
Executive and Leadership Level	470	6.2%
Mid-level Technical Skilled Labour	2,625	34.3%
Specialized Skills and Trades	2,880	37.7%
Other staff	1,667	21.8%
Overall	**7,642**	**100.0%**

Source: Apparel Industry Employer Survey 2016
*Does not include retail employees

4.1.2 Current BC Industry Workforce by Key Occupation

The BC Apparel Labour Market Partnership steering committee identified nine key occupations as essential to the industry. These nine occupations represent just under half (46%) of the provincial apparel manufacturing workforce.

Sewers are the largest occupation within the industry, constituting 21% of the total apparel workforce. Firms with anywhere from 5 to under 500 employees reported that sewers on average make up more than half their employees.

Table 4.5: Current BC Industry Workforce by Key Occupation (2016)

Key Occupation	Current Industry Workforce	Percent of Total Industry Workforce
Apparel Quality Professionals	337	4.4%
E-commerce Professionals	203	2.7%
Fit Specialist Engineers	155	2.0%
Merchandisers	222	2.9%
Pattern Makers	207	2.7%
Product Designers	362	4.7%
Sewers	1,605	21.0%
Supply Chain/Logistics	281	3.7%
Textile Sourcers	171	2.2%
Overall	**3,542**	**46.3%**

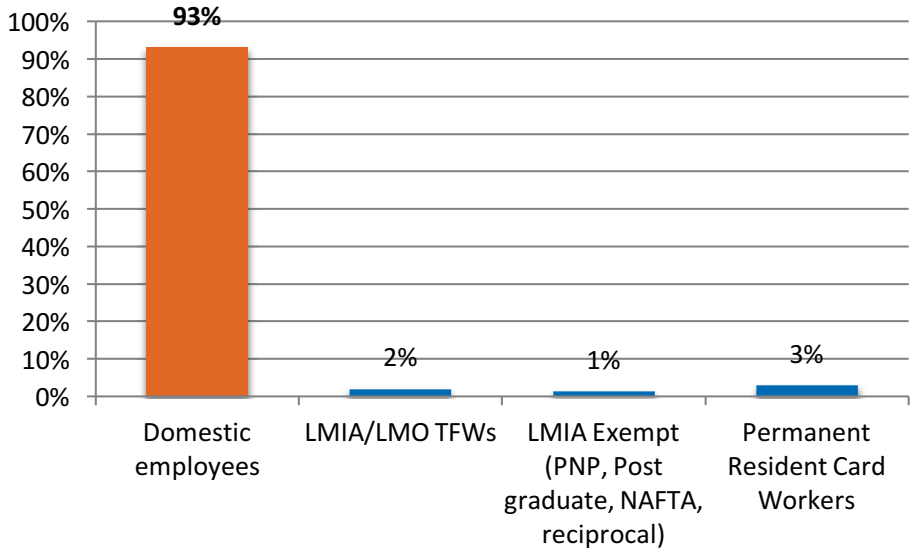
Source: Apparel Industry Employer Survey 2016

4.1.1 Current BC Industry Workforce by Employee Type

By Citizenship

In Figure 4.10 below the proportion of the workforce by foreign and domestic workers is illustrated. Almost all (93%) of the current workforce is composed of domestic workers. It stands to reason that even a moderate influx of foreign workers to the industry would have little effect on the local workforce.

Figure 4.10: Distribution of BC Workforce by Domestic and Foreign Employees

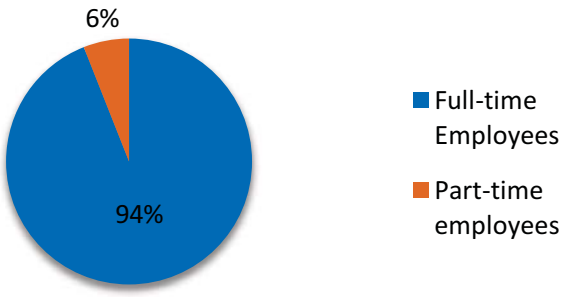


Source: Apparel Industry Employer Survey 2016

By Employment Status

The great majority of jobs in the sector are full time as illustrated in Figure 4.11 below.

Figure 4.11: Distribution of BC Workforce by Full-time and Part-time Employees



Source: Apparel Industry Employer Survey 2016

The large firms interviewed for this project reported employing mainly full-time, permanent positions in professional and highly skilled roles. Similarly, firms that focused on product development and design employed mainly full-time, permanent positions. Apparel firms which employed sewers and other manufacturing staff (whether in addition to design staff or as the main purpose of the business) tended to hire for mainly full-time positions in their factories.

The high proportion of full-time positions within the apparel industry is in contrast to recent economic data indicating a general trend in the loss of full-time positions (notably in the education, public administration, construction, energy and finance sectors) across the country but the marked increase in part-time jobs[11].

For the manufacturing side of vertically-integrated firms, as well as some of the dedicated third-party manufacturers, the seasonality of the business was noted as a challenge to keeping some workers. Cyclical client demand impacts businesses that do work on contract for other firms, sometimes making it difficult to retain entry-level and junior skilled trades. One interviewee noted that frequently, laid-off workers found other work in an entirely different industry leveraging their skills, and were not rehired at their original company or even by another apparel manufacturer in the area, resulting in a loss of a qualified, skilled worker from the industry altogether. For example, the province's medical device industry is also sourcing sewers to manufacture items such as heart-valves.

[11] The Globe and Mail. *Canada's steep job losses another blow to struggling economy* Aug 2016 On-line article.

Large companies also noted taking on interns or co-op students, although this was a minority of positions and the exact number varied by the size of the firm.

4.2 Projected Industry Workforce

Company representatives were asked to provide their workforce numbers in 2016, and to provide conservative projections for 2020 and 2025. As described earlier in the employer outlook section the majority (66%) of employers reported that they expected to increase the number of employees in their workforce over that period. Overall, the workforce for the BC apparel manufacturing sector is expected to substantially increase by 48.5% of 2016 levels by 2025. This will require a minimum additional 3,708 employees just to meet employment due to demand growth.

Table 4.6: Projection of Apparel Workforce by General Occupational Category (2016-2025)

General Occupational Categories	2016 Workforce	2020 Projected Workforce	2025 Projected Workforce	Change in Workforce (2016-2025)
Executive and Leadership Level	470	528	603	133
Mid-level Technical Skilled Labour	2,625	3,475	4,051	1,426
Specialized Skills and Trades	2,880	3,451	4,090	1,210
Other staff	1,667	2,068	2,605	938
Total Workforce	**7,642**	**9,522**	**11,350**	**3,708**
Percent Change from 2016	-	24.6%	48.5%	+48.5%
Total size of the workforce Relative to 2016 levels	100.0%	120.1%	148.5%	-

Source: Apparel Industry Employer Survey 2016

When looking at projected growth by size category (Table 4.7) it becomes more apparent that this growth is driven predominantly by the largest firms in the sector. These (3) large firms comprise nearly 30% of the workforce and will account for 37% of the industry's growth. Figure 4.12 displays the rate of growth by firm size from 2016 to 2025.

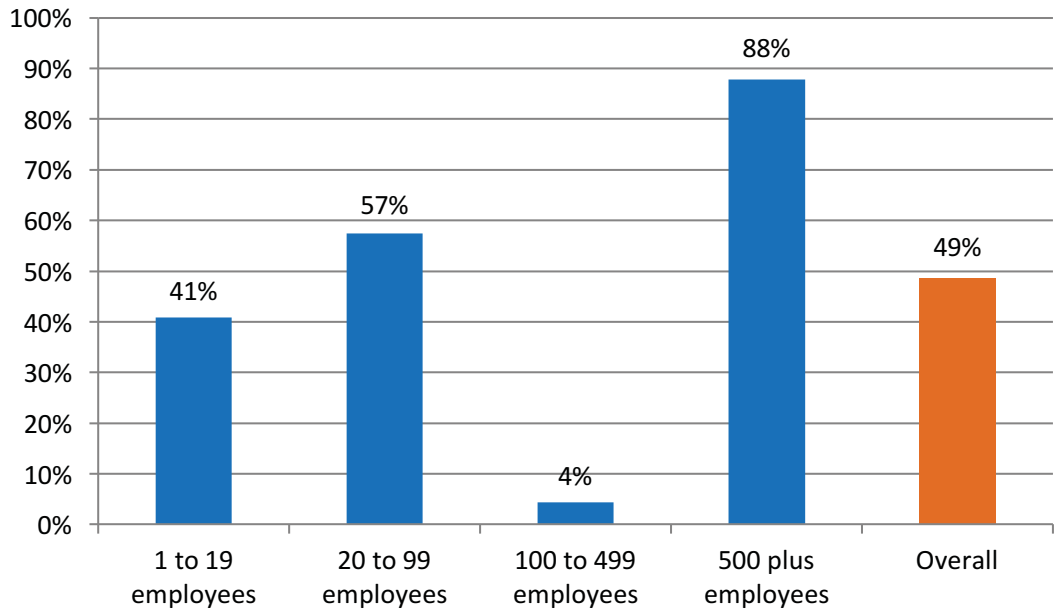
Also of note, those firms with between 100 and 499 employees show only modest growth compared to those in other size categories, which may be attributed to a smaller sample size for this category and should not be considered representative of the population.

Table 4.7: Projection of Apparel Workforce by Firm Size (2016-2025)

Firm Size	2016 Workforce	2020 Projected Workforce	2025 Projected Workforce	Change in Workforce (2016-2025)
1-19 Employees	1,685	1,989	2,374	689
20-99 Employees	1,736	2,218	2,733	997
100-499 Employees	2,021	2,079	2,109	88
500 + Employees	2,200	3,236	4,133	1,933
Total Workforce	7,642	9,522	11,350	3,708
Percent Change from 2016	-	24.6%	48.5%	+48.5%
Total size of the workforce Relative to 2016 levels	100.0%	120.1%	148.5%	-

Source: Apparel Industry Employer Survey 2016

Figure 4.12: Projected Growth of Workforce by Firm Size



Source: Apparel Industry Employer Survey 2016

4.2.2 Projected Industry Workforce by Key Occupation

In addition to providing an estimate of their overall workforce, employers were also asked to estimate the size of their workforce by key occupation. It should be emphasized that the data in this sector reflects total employment, and not the total number of hires that will be required for each occupation. This issue is covered further in Section 4.8 (Recruitment and Retention Analysis) of this report.

While the industry projected substantial growth of their workforce overall, the growth rate of key occupations was even greater. The nine key occupations are expected to grow by 79.0% of the 2016 workforce by 2025. In Table 4.8, the estimated number of employees by key occupation is shown for 2020 and 2025 respectively. The table also illustrates the overall change in workforce for each of the nine key occupations by 2025.

Table 4.8: Projection of Apparel Workforce by Key Occupations (2016-2025)

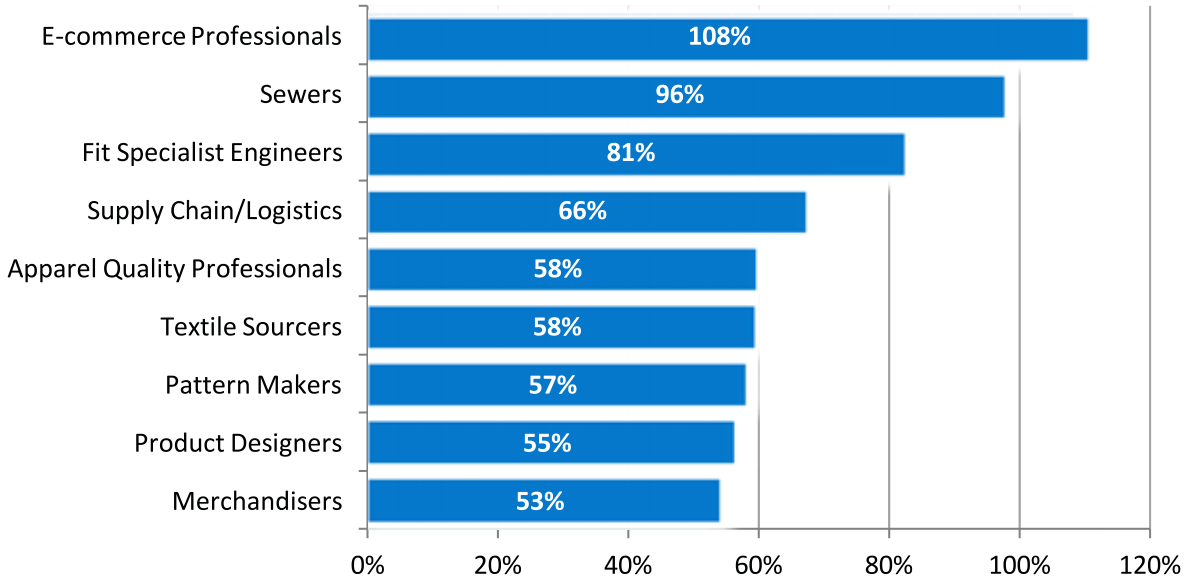
Projected Workforce	2016 Workforce	2020 Projected Workforce	2025 Projected Workforce	Change in Workforce (2016-2025)
Apparel Quality Professionals	337	497	533	196
E-commerce Professionals	203	338	423	220
Fit Specialist Engineers	155	221	279	124
Merchandisers	222	293	339	117
Pattern Makers	207	278	325	118
Product Designers	362	491	561	199
Sewers	1,605	2,413	3142	1,537
Supply Chain/Logistics	281	408	467	186
Textile Sourcers	171	222	270	99
Total Workforce	**3,542**	**5,161**	**6,340**	**2,798**
Percent Change from 2016	-	45.7%	79.0%	+79.0 %
Total size of the workforce relative to 2016 levels	100.0%	145.7%	179.0%	-

Source: Apparel Industry Employer Survey 2016

Figure 4.13 arranges the individual growth rates of the nine key occupations from highest to lowest. E-commerce Professionals are estimated to experience the highest rate of growth of the nine occupations, more than doubling in number by 2025. Key informant interviews also revealed high demand for computer programmers to build their e-commerce platforms - websites, electronic marketing campaigns and management of payment methods. Data analysis, the ability to parse massive data sets, is a new technology skill-set in demand now that social media sites have enabled, and monetized, the collection of significant amounts of personal information and online behavioural patterns. While it was imparted that there seem to be a sufficient numbers of graduates in these fields to fill demand many don't think of the apparel industry as a natural fit for them. As on-line retail surpasses traditional bricks and mortar retail this area could also emerge as a new pressure point.

While Merchandisers and Product Designers are projected to experience the least growth (53% and 55% respectively), this growth rate is still greater than the overall growth rate of the industry (49%) and considered significant.

Figure 4.13: Projection of Growth by Key Occupations (2016-2025)



Source: Apparel Industry Employer Survey 2016

4.3 Current Vacancy Rates

A common measure of hiring difficulty is the current vacancy rate within the sector and/or for identified occupations. As part of the study, employers were asked to identify the number of vacant positions, both overall and by key occupation.

Vacancy rates by general occupational category for the apparel manufacturing sector as reported by employers are high (15.6%); the highest vacancy rates were reported in Specialized Skills and Trades (21.2%) group, followed by Mid-level Technical Skilled Labour (13.2%), Other Staff (13.0%) and Executive and Leadership (4.5%).

Length of vacancies open is another concerning point with some senior positions open and remaining unfilled for 6-24 months.

Table 4.9: Vacancy Rate by General Occupational Category

General Occupational Category	Number of Vacancies	Vacancy Rate
Executive and Leadership Level	22	4.5%
Mid-level Technical Skilled Labour	350	13.2%
Specialized Skills and Trades	618	21.2%
Other staff	218	13.0%
Total Number of Vacancies	**1,208**	**15.6%**

Source: Apparel Industry Employer Survey 2016

Key informant interviewees did not give specific numbers in terms of how many positions are currently vacant, but overall their vacancies fit the trends described in Section 4.1 (Current BC Industry Workforce). Large, vertically integrated firms are struggling to hire highly skilled and highly experienced individuals for management and executive positions, while firms which manufacture locally (whether exclusively manufacturers or integrated firms with local production) are struggling to find and retain cutters, sewers and other production workers.

4.3.2 Current Vacancy Rate by Key Occupation

The occupation with the highest vacancy rate was sewers (27%). Sewers make up a large proportion of the industry's overall workforce (21%), which suggests that the sector is desperate to find and hire workers in this occupation.

Other occupations that currently pose challenges to hire workers (but do not compose such a large portion of the workforce as sewers) are product designers and e-commerce professionals (23% and 22% respectively).

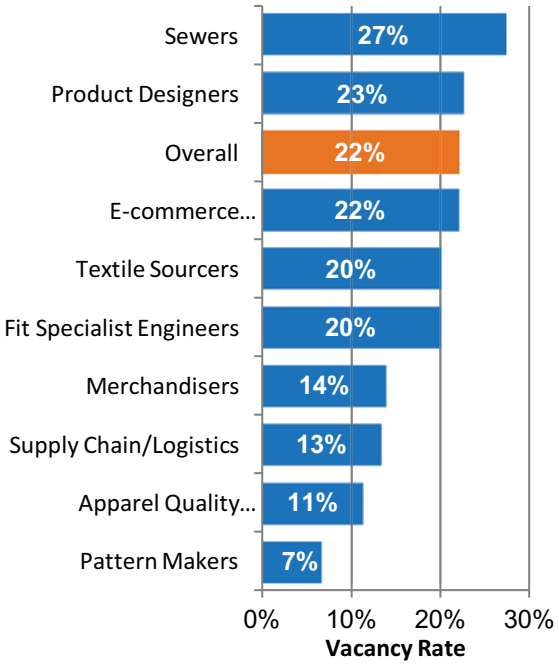
What is also alarming is the overall vacancy rate of the nine key occupations of 22%, indicating that fully 1 in 5 positions in BC in these key occupations are sitting vacant which is an incredible competitive disadvantage that could seriously curtail the amazing growth rates the sector has been experiencing in recent years.

Table 4.10: Current Vacancies by Key Occupations

Key Occupations	Number of Vacancies	Vacancy Rate
Apparel Quality Professionals	38	11.4%
E-commerce Professionals	41	20.2%
Fit Specialist Engineers	31	19.9%
Merchandisers	31	14.0%
Pattern Makers	14	6.8%
Product Designers	82	22.5%
Sewers	438	27.3%
Supply Chain/Logistics	38	13.4%
Textile Sourcers	37	22.0%
Overall	**750**	**21.7%**

Source: Apparel Industry Employer Survey 2016

Figure 4.14: Current Vacancy Rates by Key Occupations



Source: Apparel Industry Employer Survey 2016

Photo；Lululemon

4.4 Projected Retirements

Information provided by employers suggests that the sector will face large, and increasing, hiring requirements in order to meet demands associated with both retirements and employee turnover (job separation). By 2023, over 30% of the sector's current workforce will likely have retired.

The majority of retirements are expected to occur within the specialized skills and trades workforce, where, by 2025, a total of 1,281 workers are expected to retire, representing 45% of the current specialized skills and trades workforce.

The executive and leadership workforce is expected to have the highest proportion of retirements between the four general occupation categories, where 58% of current workers are expected to retire, representing 272 positions.

Mid-level technical and skilled labour workforce is also expected to have a fifth (20%) of its workforce retire by 2025.

As highlighted in Table 4.11, the sector can expect to witness average annual retirements of about 4% each year.

Table 4.11: Projected Retirements by General Occupational Category (2016-2025)

General Occupational Category	2016		2016 - 2020		2020 - 2025		Total	
	#	%	#	%	#	%	#	%
Executive and Leadership Level	31	6.6%	102	21.7%	139	29.5%	272	57.8%
Mid-level Technical Skilled Labour	65	2.5%	161	6.1%	296	11.3%	522	19.9%
Specialized Skills and Trades	185	6.4%	485	16.9%	611	21.2%	1,281	44.5%
Other staff	41	2.5%	89	5.4%	153	9.2%	283	17.0%
Total Retirements by Year	**322**	**4.2%**	**837**	**11.0%**	**1198**	**15.7%**	**2,358**	**30.9%**
Total Cumulative Retirements	**322**	**4.2%**	**1159**	**15.2%**	**2,358**	**30.9%**	**2,358**	**30.9%**

Source: Apparel Industry Employer Survey 2016

4.4.2 Projected Retirement by Key Occupation

The workforce employed by the apparel manufacturing sector can be characterized as an older, more experienced workforce. For several occupations the industry attracts individuals who are established in their field and bring a solid knowledge base, skills and experience to the workforce. From a retirement standpoint, this trend lends itself to a high proportion of expected retirements across the industry and among certain key occupations specifically.

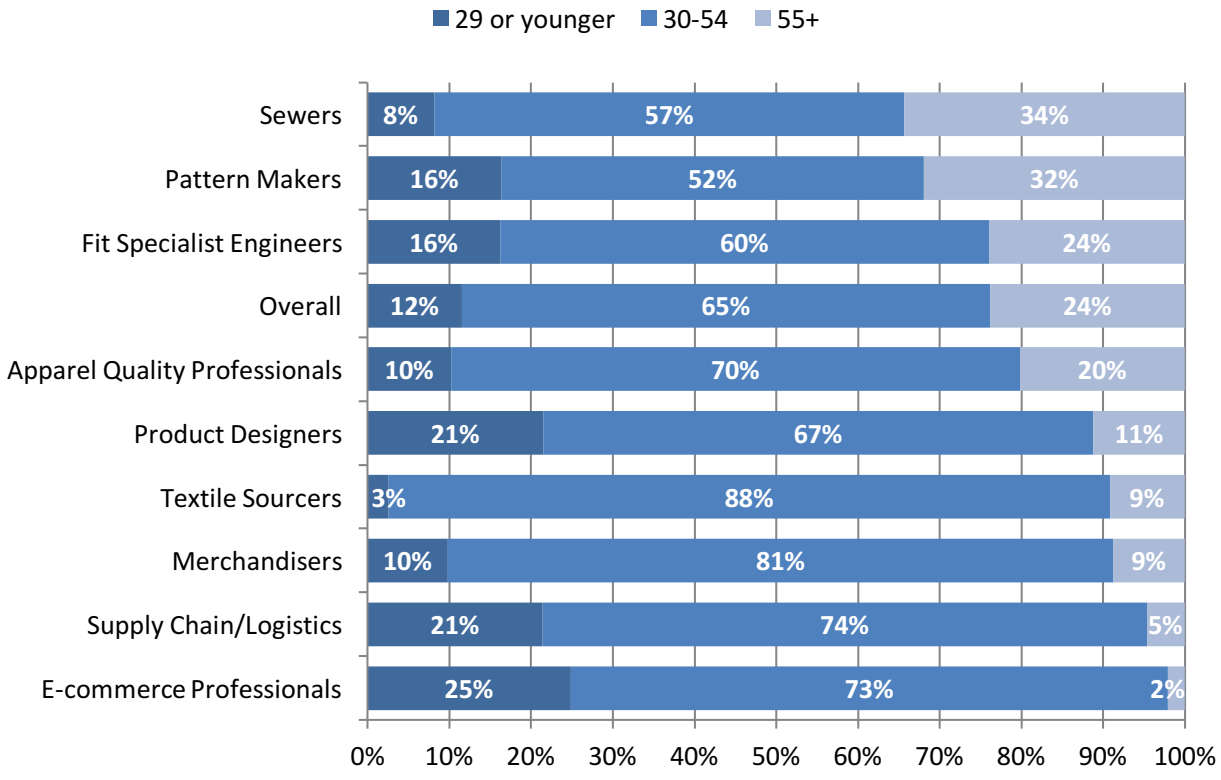
Key informant interviews found that among the manufacturing firms, and integrated firms that design and produce wholly locally, concerns over retirement focused on the number of anticipated retirements and the lack of younger workers to fill the gaps left by retiring workers. Sewers, cutters and production workers tended to be older, and large numbers of workers are expected to retire in the next five to ten years. In these cases, employers are

concerned about the sheer number of vacancies that will need to be filled. These employers also expressed some concern over the talent and knowledge that will be lost.

0 shows the distribution of age by selected occupations. Currently one quarter (24%) of employees in selected occupations are over 55 years of age. Sewers have the greatest proportion of employees over 55 in the workforce (34%), followed closely by pattern makers (32%).

There are some occupations that prove to be exceptions to the "older workforce" characterization, these include E-commerce professionals who are comprised of the greatest proportion of fewer than 30 employees (25%) and those who are employed in supply chain/ logistics (21% of the workforce under 30).

Figure 4.15: Age of Workforce by Key Occupations



Source: Apparel Industry Employer Survey 2016

As shown in Figure 4.16, 24% of workers within key occupations are expected to retire in the next 10 years.

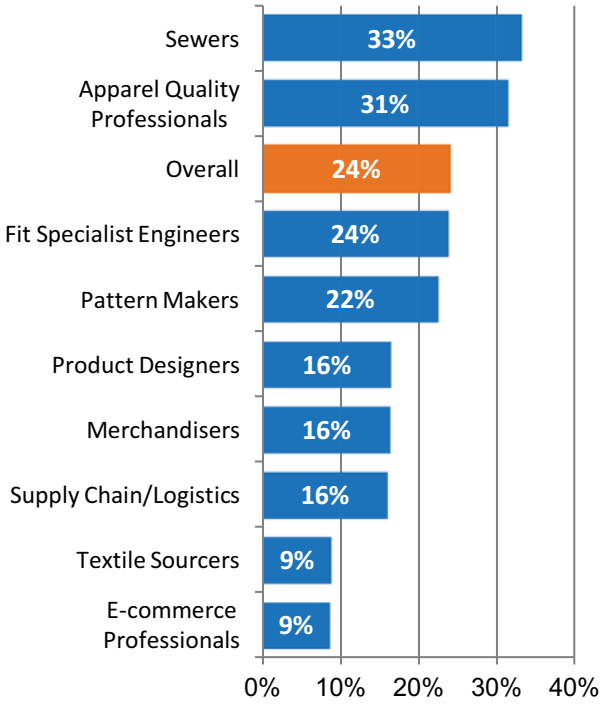
As can be expected due to the high proportion of workers over 55, sewers are expected to retire in the greatest number with 33% of the 2016 workforce retiring by 2025. This accounts for approximately 530 sewers leaving the BC workforce through retirement alone (Table 4.12). Also of note, apparel quality professionals (while composing a smaller proporiton of the overall workforce at 4.5%), will retire 31% (or approximately 95 employees) of its workforce by 2025.

Table 4.12: Projected Retirements by Key Occupations (2016-2025)

Key Occupations	Total Retirements by 2016-2025	
	#	%*
Apparel Quality Professionals	95	31.4%
E-commerce Professionals	14	8.7%
Fit Specialist Engineers	35	23.7%
Merchandisers	28	16.4%
Pattern Makers	45	22.5%
Product Designers	50	16.5%
Sewers	530	33.1%
Supply Chain/Logistics	37	16.0%
Textile Sourcers	13	8.9%
Total Retirements	**847**	**23.9%**

Source: Apparel Industry Employer Survey 2016
*Percent of 2016 Workforce

Figure 4.16: Projected Retirements by Key Occupations



Source: Apparel Industry Employer Survey 2016

As with the need for positions, key informant interviews found there is a notable division within the apparel industry regarding concern over upcoming retirements and turnover. Among the larger, integrated firms as well as firms focused mainly on design and distribution, concerns regarding retirement focused on the accumulated knowledge of a select few management and executive positions. These concerns focused on developing succession plans, hiring mid-level management and executive talent to groom and prepare for the company's future, and ensuring that corporate knowledge did not get lost as the older executives retire in the next 10 to 15 years.

4.5 Turnover

In addition to having to replace retiring workers, new hiring requirements must also take into account the number of workers who leave their jobs and seek employment elsewhere. The labour market study included questions designed to measure turnover rates in the industry.

Turnover within the apparel workforce was identified in key informant issues as a moderate human resource issue for the sector. Some challenges that interviewees mentioned in regards to turnover included:

- The work is sometimes very seasonal, and when employees get laid off they sometimes find work in entirely different industries and don't come back when things pick up again
- Skyrocketing land values in Vancouver are pushing factories out of the city proper and into Burnaby, Richmond, and other nearby municipalities. This is too far for some to commute, including many of the skilled sewers that employers would like to retain. One major firm has tried to address this, for example, by running their own shuttle bus from their main headquarters where their old factory is located to their new one in Burnaby.
- Historically, a lot of the skilled workers in Vancouver are coming from overseas where they've been trained as sewers, like China or the Philippines. But it seems that many of the immigrants coming into Vancouver lately have enough money and don't need to work. It can be hard to keep these employees, since they don't really lose much if they don't like the work environment and walk away.
- Highly competitive global talent is poached. Especially in large firms senior talent is head hunted or poached from local or international competitors since similar vacancies are in demand across the industry globally.

The turnover rate within the apparel manufacturing industry in 2016 (7.0%) is similar to the turnover rate for Canada, which in 2013 was 7.3%[12]. Notwithstanding the moderate

[12] Source: Conference Board of Canada. 2013.

turnover rate, the industry still stands to lose 37.8% of its workforce through attrition by 2025 as illustrated in Table 4.13.

It must be taken into consideration that with respect to turnover it is expected that a proportion of the workers indicated as leaving a particular company will rejoin the workforce in the same industry in BC. This means that not all employees lost to turnover will require new hires to fill the position. From analysis of similar industries and key informant interviews we assume that only 50% of the turnover will leave the industry. This will be accounted for in the Workforce Demand section (4.6).

Table 4.13: Projected Turnover by General Occupational Category (2016-2025)

Projected Turnover	2016		2016 - 2020		2020 - 2025		Total	
	#	%	#	%	#	%	#	%
Executive and Leadership Level	27	5.8%	59	12.5%	74	15.7%	160	2.1%
Mid-level Technical Skilled Labour	180	6.9%	364	13.9%	472	18.0%	1016	13.3%
Specialized Skills and Trades	119	4.1%	230	8.0%	304	10.6%	653	8.6%
Other staff	205	12.3%	360	21.6%	492	29.5%	1056	13.8%
Total Turnover	**531**	**7.0%**	**1,012**	**13.3%**	**1,343**	**17.6%**	**2,886**	**37.8%**
Total Cumulative Turnover	**531**	**7.0%**	**1,543**	**20.2%**	**2,886**	**37.8%**	**2,886**	**37.8%**

Source: Apparel Industry Employer Survey 2016

4.5.2 Projected Turnover by Key Occupations

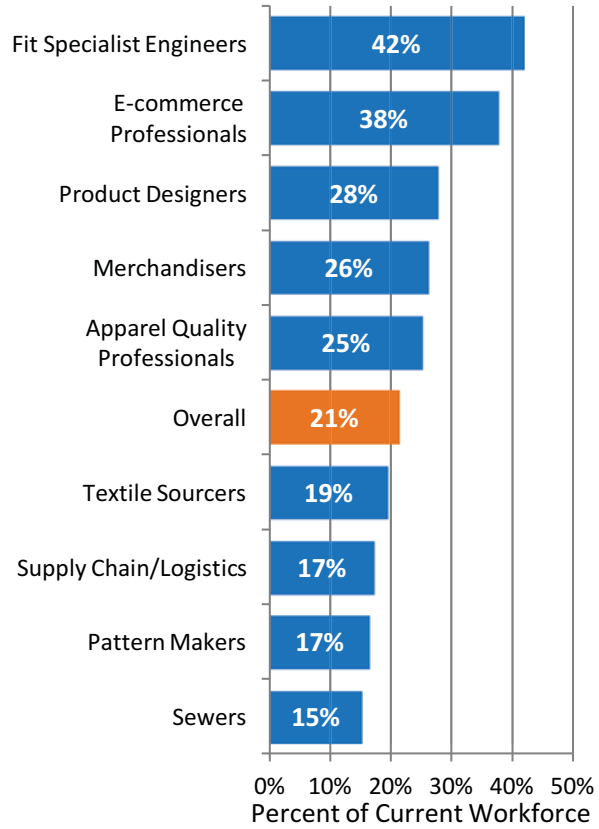
While overall turnover by selected occupations (21%) is considerably less than overall turnover for the industry as a whole (38%) certain key occupations are projected to lose a higher proportion of their workforce due to attrition. Fit Specialist Engineers are expected to lose just under half (42%) of their employees by 2025 because of turnover, but it should be noted that this occupation group represents the smallest proportion of overall workforce (2%) of all key occupations. Also of note, employers found that the sewers occupation suffers the least amount from turnover, and is projected to lose only 15% of their workforce by 2025 due to attrition.

Table 4.14: Projected Turnover by Key Occupations (2016-2025)

Key Occupations	Total Turnover by 2025	
	#	%
Apparel Quality Professionals	85	25.2%
E-commerce Professionals	77	37.6%
Fit Specialist Engineers	64	41.7%
Merchandisers	58	26.1%
Pattern Makers	34	16.5%
Product Designers	100	27.7%
Sewers	244	15.2%
Supply Chain/Logistics	49	17.3%
Textile Sourcers	33	19.5%
Total Turnover	**744**	**21.0%**

Source: Apparel Industry Employer Survey 2016

Figure 4.17: Projected Turnover Rates by Key Occupations



Source: Apparel Industry Employer Survey 2016

4.6 Workforce Demand

A key objective of the Labour Market Study was to estimate total hiring requirements of the sector based on several factors such as demand expansion, filling of vacant positions, and replacing those workers who exit the sector due to retirement and other reasons. The apparel manufacturing industry predicts substantial growth by 2025, and when considering the aging workforce and moderate employee turnover it will have to replace a substantial proportion of its workforce if it is to keep up with the expansion of the industry.

Over the next 10 years 114% of the BC workforce will need to be replaced if the industry is to keep up with projected growth. In other words, in addition to replacing those workers who leave due to retirement or other reasons and filling current vacancies the industry will need to provide for an additional 3,708 employees from projected growth alone. Table 4.15 lays out the hiring requirements based on all factors.

Table 4.15: Employer-Projected Number of New Hires by General Occupational Category (2016-2025)

General Occupational Category	Current Vacancies 2016		Retirements (2016-2025)		Other Forms of Attrition* (2016-2025)		Projected Growth (2016-2025)		Total Number of New Hires (2016-2025)	
	#	%	#	%	#	%	#	%	#	%
Executive and Leadership Level	22	4.7%	272	57.9%	80	17.0%	133	28.3%	507	107.9%
Mid-level Technical Skilled Labour	350	13.3%	522	19.9%	508	19.4%	1426	54.3%	2806	106.9%
Specialized Skills and Trades	618	21.5%	1281	44.5%	327	11.3%	1210	42.0%	3436	119.3%
Other staff	218	13.1%	283	17.0%	528	31.7%	938	56.3%	1967	118.0%
Overall	**1,208**	**15.8%**	**2,358**	**30.9%**	**1,443**	**18.9%**	**3,708**	**48.5%**	**8,717**	**114.1%**

Source: Apparel Industry Employer Survey 2016
*Assuming 50% stay in the BC industry

By 2025 all key occupations will be required to replace more than all the employees currently employed in the sector. In fact, to keep pace with growth and replacement of losses (retirement, turnover, and current vacancies) the nine key occupations will require over one and a third times (135%) the current workforce by 2025. This is greater than the overall industry percentage of new hires by over 20%, emphasizing the greater difficulty of hiring for these specific occupations.

Figure 4.18 shows that the most notable key occupation with respect to workforce replacement are sewers, where 164% of the current workforce (or 2,627 employees as noted in Table 4.16) will need to be generated to keep pace with growth and other losses.

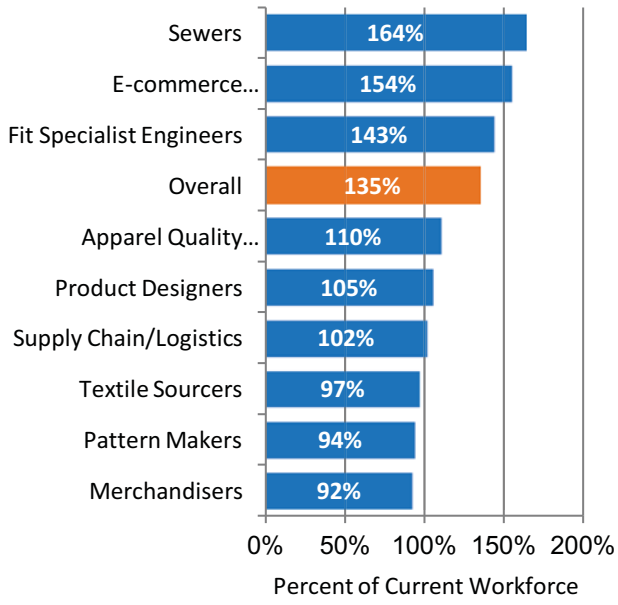
Table 4.16: Employer-Projected Number of New Hires by Key Occupation (2016-2025)

Key Occupational Category	Current Vacancies 2016		Retirements (2016-2025)		Other Forms of Attrition* (2016-2025)		Projected Growth (2016-2025)		Total Number of New Hires (2016-2025)	
	#	%	#	%	#	%	#	%	#	%
Apparel Quality Professionals	38	11.4%	95	31.4%	42.5	12.6%	196	58.2%	372	110.2%
E-commerce Professionals	41	20.2%	14	8.7%	38.5	19.0%	220	108.4%	314	154.4%
Fit Specialist Engineers	31	19.9%	35	23.7%	32	20.6%	124	80.0%	222	143.2%
Merchandisers	31	14.0%	28	16.4%	29	13.1%	117	52.7%	205	92.3%
Pattern Makers	14	6.8%	45	22.5%	17	8.2%	118	57.0%	194	93.7%
Product Designers	82	22.5%	50	16.5%	50	13.8%	199	55.0%	381	105.2%
Sewers	438	27.3%	530	33.1%	122	7.6%	1,537	95.8%	2,627	163.7%
Supply Chain/Logistics	38	13.4%	37	16.0%	24.5	8.7%	186	66.2%	286	101.6%
Textile Sourcers	37	22.0%	13	8.9%	16.5	9.6%	99	57.9%	166	96.8%
Overall	**750**	**21.7%**	**847**	**23.9%**	**372**	**18.9%**	**2,798**	**79.0%**	**4,765**	**134.5%**

Source: Apparel Industry Employer Survey 2016
*Assuming 50% stay in the BC industry

Interestingly, the next greatest growth will occur in e-commerce professionals. This may be indicative of a shift towards a greater technology presence across the industry.

Figure 4.18: Requirement of Replacement of Current Workforce by 2025 by Key Occupation

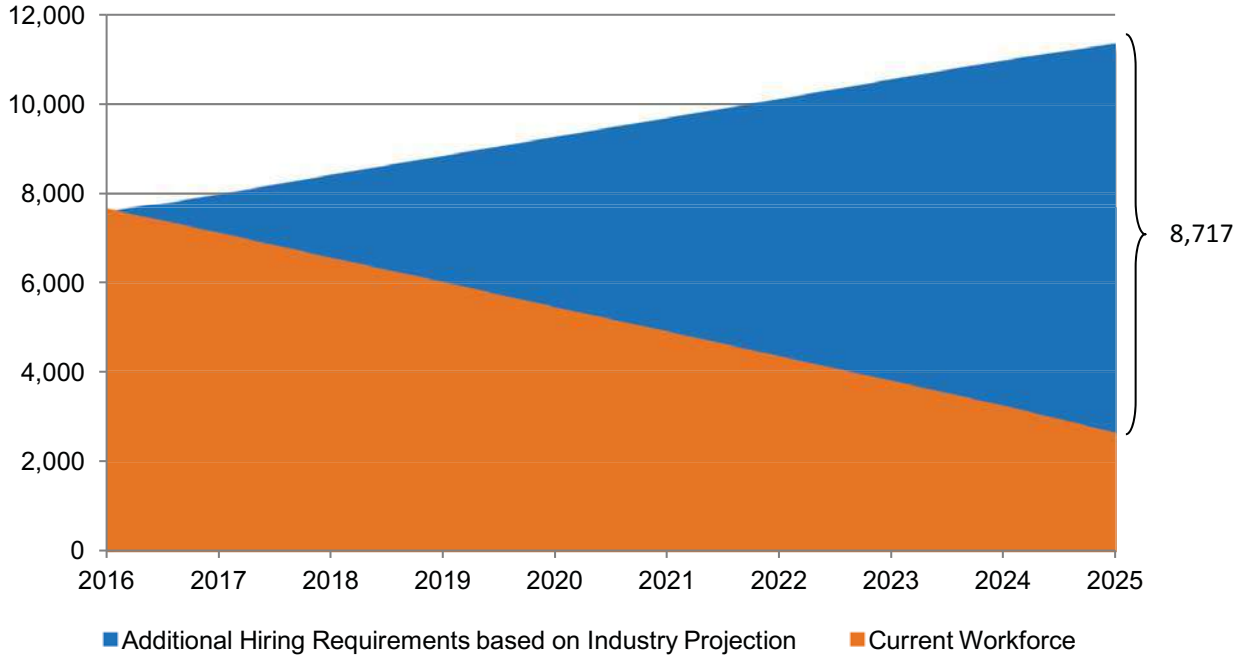


Source: Apparel Industry Employer Survey 2016

4.7 Industry Employment Projection

The industry projects, based on the data provided by apparel manufacturing employers, that its employment level will increase substantially by 2025. The quantified projection in Figure 4.19 shows the increase of 49% from 7,642 workers in 2016 to 11,350 in 2025 (detailed in Table 4.7). Taking into consideration losses (retirement, turnover, and current vacancies) the total gap between the current workforce and future is substantial (114% of 2016 or 8,717 employees).

Figure 4.19: Projected Hiring Requirement of Current Workforce by 2025



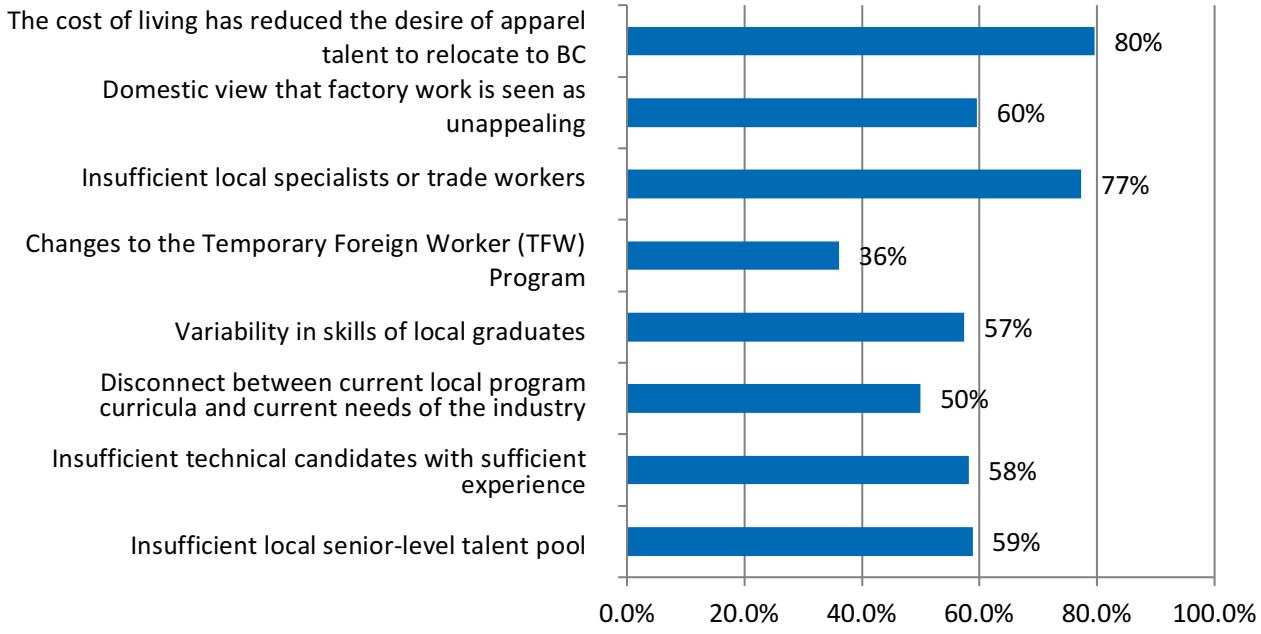
Source: Apparel Industry Employer Survey 2016

4.8 Recruitment and Retention Analysis

4.8.1 Recruitment Trends and Challenges

As highlighted in Figure 4.20, employers cited numerous challenges in terms of hiring skilled workers. Key challenges included the cost of living in Greater Vancouver area, and lack of local specialists or trade workers.

Figure 4.20: Greatest Challenges in Acquiring Skilled Workers*



Source: Apparel Industry Employer Survey 2016
*Top rating 4 agree + 5 strongly agree

As shown in the chart above, nearly all of these issues are proving to be challenges for local employers trying to hire qualified talent. The only challenge that was not considered to be an issue by the majority of respondents was “Changes to the Temporary Foreign Worker Program” even though that issue was selected by more than one-third of employers.

To get a more granular look at how these hiring challenges affect different firms, responses were also broken down by size of employer. The table below shows the proportion of each firm type who identified each of these issues as a major challenge to hiring qualified workers.

Table 4.17: Major Challenges in Hiring Skilled Workers by Firm Size

Reasons for Hiring Challenges	Firm Size				
	1 to 19 employees	20 to 99 employees	100 to 499 employees	500+ employees	Valid n
Changes to the Temporary Foreign Worker (TFW) Program	2 (10.5%)	7 (53.8%)	1 (100.0%)	3 (100.0%)	36
Disconnect between current local program curricula and current needs of the industry	12 (46.2%)	8 (47.1%)	1 (50.0%)	3 (100.0%)	48
Domestic view that factory work is seen as unappealing	16 (51.6%)	12 (70.6%)	2 (66.7%)	1 (100.0%)	52
Insufficient local senior-level talent pool	16 (55.2%)	9 (56.3%)	2 (66.7%)	3 (100.0%)	51
Insufficient local specialists or trade workers	23 (71.9%)	13 (81.3%)	2 (100.0%)	3 (100.0%)	53
Insufficient technical candidates with sufficient experience	14 (43.8%)	13 (76.5%)	2 (66.7%)	3 (100.0%)	55
The cost of living has reduced the desire of apparel talent to relocate to BC	21 (75.0%)	13 (86.7%)	2 (66.7%)	3 (100.0%)	49
Variability in skills of local graduates	13 (44.8%)	11 (78.6%)	0 (0.0%)	3 (100.0%)	47

Valid n varied by question due to non-response to various questions. Percentages were calculated using the number of group-level respondents who answered the question, rather than the overall valid n per question, in order to avoid misrepresentation resulting from a larger number of small firms than large firms in the respondent pool.
Source: Apparel Industry Employer Survey 2016

As shown in the table, large firms tended to identify all or most challenges as creating serious barriers to their ability to hire qualified talent. Small firms, in comparison, were less likely to report as many major challenges to meeting their hiring needs, although a couple (cost of living, and insufficient local specialists and trade workers) were reported to be challenges for a large majority of small firms.

4.8.2 Hardest to Fill Positions

More in-depth data regarding hiring challenges was collected through targeted questions asking employers which positions they find most challenging to fill. Employers were asked to give a ranked response, with 1 indicating the position was “not hard at all” to fill, and 5 indicating the position was “very hard” to fill.

Due to the fact that many of these positions are sub-sector dependent (e.g., sewers are much more in demand among manufacturing employers than design employers), these findings have been broken out by the focus of the firm. Self-reported firm focus is not mutually exclusive; firms could report being focused on both design and on-shore manufacturing, for example. Therefore, the total number of respondents among all four of the following tables should be expected to add up to more than 85 (the total number of employers who responded to the survey).

Table 4.18: Position Hiring Challenges for Design-Focused Firms

Occupation Group	Mean Rating	Valid n
Sewers	4.35	17
Pattern Makers	4.13	16
Textile Sourcers	4.08	13
Fit Specialist Engineers	4.06	18
Product Designers	3.95	19
Apparel Quality Professionals	3.94	17
Executives	3.85	13
Merchandisers	3.75	12
Supply Chain and Logistics Professionals	3.41	17
E-Commerce Professionals	2.71	14

Source: Apparel Industry Employer Survey 2016

Table 4.19: Position Hiring Challenges for Off-Shore Manufacturing Focused Firms

Occupation Group	Mean Rating	Valid n
Textile Sourcers	4.50	6
Executives	4.14	7
Fit Specialist Engineers	4.10	10
Product Designers	4.10	10
Sewers	4.10	10
Pattern Makers	4.00	7
Apparel Quality Professionals	3.89	9
Supply Chain and Logistics Professionals	3.36	11
Merchandisers	3.33	6
E-Commerce Professionals	2.63	8

Source: Apparel Industry Employer Survey 2016

Table 4.20: Position Hiring Challenges for On-Shore Manufacturing Focused Firms

Occupation Group	Mean Rating	Valid n
Sewers	4.30	37
Pattern Makers	3.96	27
Product Designers	3.54	26
Textile Sourcers	3.37	19
Apparel Quality Professionals	3.25	28
Fit Specialist Engineers	3.18	28
Merchandisers	3.14	21
Executives	3.12	17
Supply Chain and Logistics Professionals	2.77	26
E-Commerce Professionals	2.29	24

Source: Apparel Industry Employer Survey 2016

Table 4.21: Position Hiring Challenges for Retail-Focused Firms

Occupation Group	Mean Rating	Valid n
Executives	4.33	6
Sewers	4.33	12
Product Designers	4.30	10
Textile Sourcers	4.22	9
Pattern Makers	4.17	12
Apparel Quality Professionals	4.00	9
Merchandisers	4.00	11
Fit Specialist Engineers	3.92	12
Supply Chain and Logistics Professionals	3.44	9
E-Commerce Professionals	2.70	10

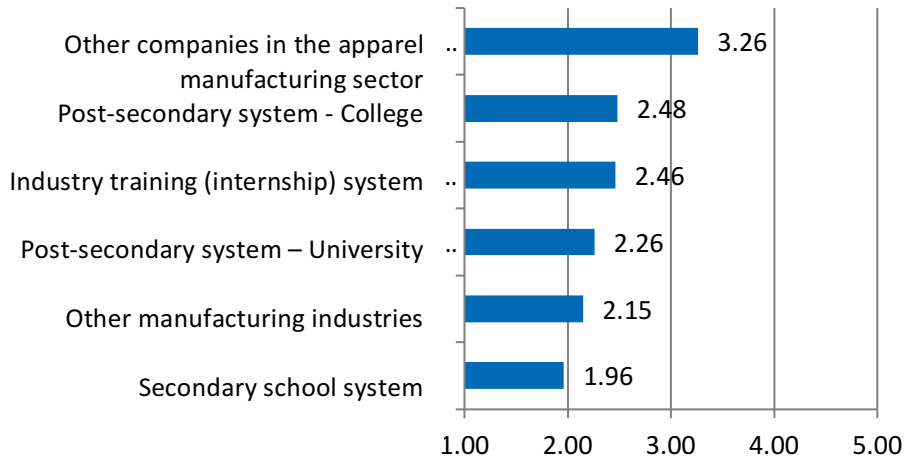
Source: Apparel Industry Employer Survey 2016

For all firms except those with an off-shore manufacturing focus, qualified sewers were among the top three most difficult positions to fill at respondents' firms. Pattern makers and product designers also ranked highly among in-demand positions that are difficult to fill across most all firm types. E-commerce professionals were the least challenging positions to hire for, across all firms.

4.8.3 Sources of new workers

Finally, on the issue of worker recruitment, the survey asked employers what sources of new workers they relied upon most heavily to fill positions in their companies. Each potential source of workers was ranked from 1 to 5, with 1 being "Not at all important" and 5 being "Very important".

Figure 4.21: Employers' Ranking of Importance of Sources for Workers



Source: Apparel Industry Employer Survey 2016, n=50

As might be expected in a labour market where there is high demand and low supply of qualified professionals, employers report recruiting from other firms ("poaching") as their most important source of workers. Unfortunately, growth rates have now exceeded local supply meaning that poaching is not as viable an option as before. Furthermore, industry players have agreed to work-together on common issues such as labour supply in order to help collectively grow a sustainable apparel cluster in British Columbia. This spirit of cooperation makes poaching less of an attractive solution given the environment of collaboration.

College and industry training were the next-most important sources of workers; the secondary school system was ranked as the least important source of workers by employers in this survey. This question was further broken down by firm size, to identify any major differences in hiring sources by firm size.

Table 4.22: New Worker Sources, by Firm Size

New Hire Source	Firm Size				Valid n
	1 to 19 Employees	20 to 99 Employees	100 to 499 Employees	500+ Employees	
Industry training (internship) system	2.30	2.50	3.33	3.00	52
Other companies in the apparel manufacturing sector	2.94	3.50	3.67	5.00	57
Other manufacturing industries	2.10	1.72	4.00	3.33	54
Post-secondary system - College	2.38	2.33	3.00	4.00	53
Post-secondary system - University	2.00	2.18	3.00	4.67	54
Secondary school system	2.20	1.33	2.67	2.67	54

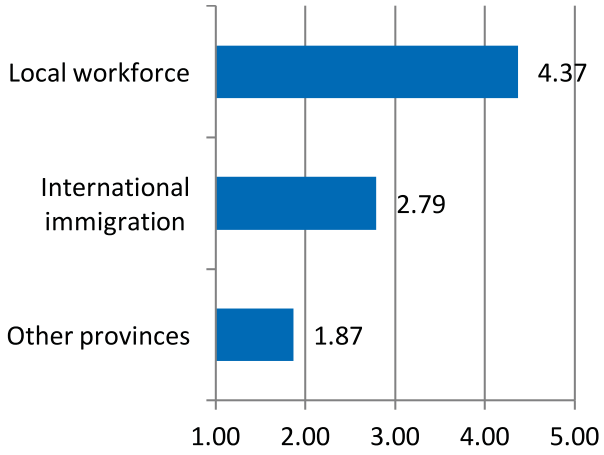
Source: Apparel Industry Employer Survey 2016
(1= Not at all important, 5=Very important)

The larger the firm is, the more likely it is to identify other companies as an important source of new hires. Large firms also rated universities as more important sources of new hires than smaller firms did. Among all firm sizes, the secondary school system was rated as the least important source of new hires among the options given.

4.8.4 New workers by geography

Employers were also asked to rate the relative importance of where they recruit workers from, using the same 1 to 5 scale described above. These findings are illustrated in Figure 4.22 below.

Figure 4.22: Employers' Ranking of Where Workers are Recruited From



Source: Apparel Industry Employer Survey 2016, n=50

As shown in the table, local qualified talent comprises by far the most important labour pool for employers in the BC apparel sector. However, it is notable that international immigration, rather than inter-provincial migration within Canada, comprises the second-most important source of qualified workers for apparel sector employers in BC.

This was further broken down by firm size to examine any possible differences in where employers tend to recruit new employees from.

Table 4.23: Importance of Geographic Source of New Hires by Firm Size

New Hire Source	Firm Size				Valid n
	1 to 19 Employees	20 to 99 Employees	100 to 499 Employees	500+ Employees	
Local workforce	4.33	4.37	4.67	4.33	54
Other provinces	1.53	1.83	3.00	4.33	52
International immigration	2.23	3.18	4.00	5.00	53

Source: Apparel Industry Employer Survey 2016

Larger firms tended to rank out-of-province sources of employees more highly than smaller firms, likely reflecting their greater ability to engage in national and international hiring campaigns, not to mention the higher likelihood of having the human resources required to manage these campaigns and navigate immigration systems.

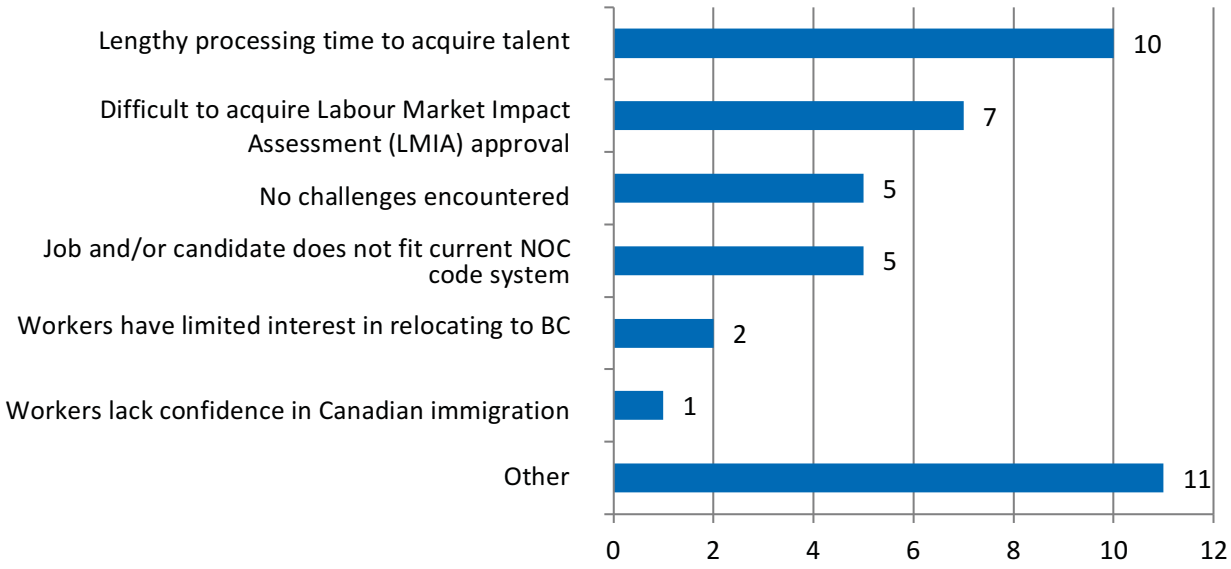
4.8.5 Accessing International Talent

Respondents were asked to choose the greatest challenges to accessing international talent. Lengthy processing time was identified as the greatest challenge, while significant advertising requirements and limited interest were not seen as challenges at all.

Numerous firms indicated, both in the surveys and in key informant interviews, that hiring qualified talent from abroad is an important strategy for them to fill skilled and in-demand positions at their firms. However, bringing in international talent to fill these positions can be made less feasible by numerous challenges.

One question in the survey asked firms to identify the largest obstacle they had encountered in trying to bring in international workers to fill local positions. **Figure 4.23** illustrates the number of respondents who identified each issue as their largest challenge to bringing in foreign talent.

Figure 4.23: Greatest Challenge Accessing International Talent



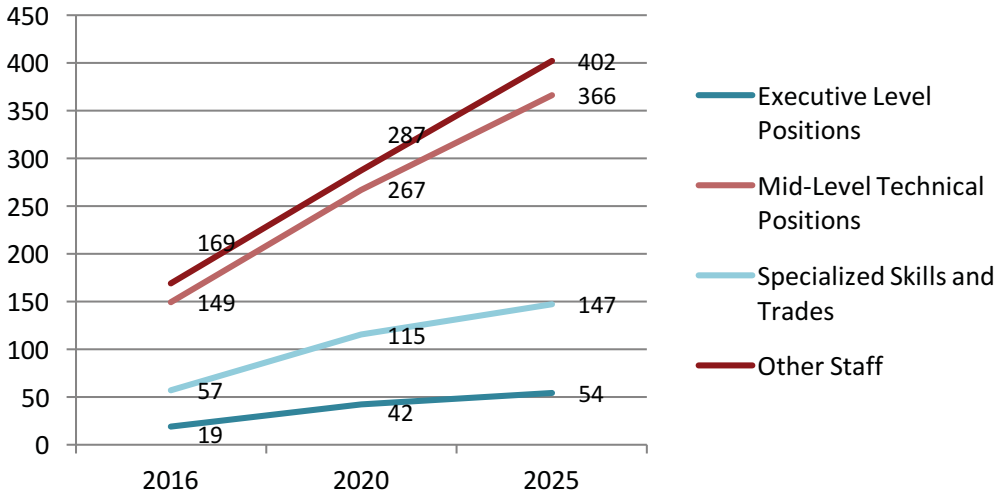
Source: Apparel Industry Employer Survey 2016, n=41

Both lengthy processing times and difficulty in getting LMIA approval were noted as two of the biggest challenges to bringing in foreign talent for local positions. A large number of respondents selected “Other” as their greatest challenge to hiring international talent. Further examination of these “Other” answers did not reveal any particular patterns or additional themes in responses; open-ended responses to this question included issues such as communication barriers, and a lack of support from government immigration programs to bring skilled sewers to Canada.

4.8.6 Retention Trends and Challenges

In addition to recruitment of workers to fill expansion related growth in apparel firms, retention of employees is a key issue that will have an impact on hiring demands in the future. Employers were asked in the survey for estimates on how many employees from various position categories they anticipated losing over the next ten years, excluding retirements. These estimates incorporate losses due to employees leaving the firm (whether by choice or firing), leaving the industry, or leaving the workforce. Figure 4.24 provides a visual overview of anticipated employee losses over this time period, among all employers that responded to the survey.

Figure 4.24: Anticipated Employee Attrition, Excluding Retirements, by Occupational Category



Source: Apparel Industry Employer Survey 2016, n=65

As might be expected, positions with higher requirements for educational background and experience are anticipated to lose fewer employees than less qualified and less skilled groups.

Key informant interviews did not suggest that apparel firms in BC are particularly struggling to retain employees in these highly specialized, educated or experienced roles such as executives and high-level product designers. Challenges in retaining workers tended to arise when discussing production-level workers such as sewers and cutters.

In addition to high levels of expected retirements in coming years (see Section 4.4, Projected Retirements), employees leaving for "other reasons" was cited as exacerbating their issues with worker shortages. Reasons for employees leaving, other than retirement, included issues such as:

- seasonal layoffs making it hard to promise consistent work to employees;
- land values pushing factories out of Vancouver city proper and into neighbouring cities where land is cheaper, but employees may not be willing to commute that far for work; and
- many workers simply not "needing" the work enough to stay committed to the workplace.

A weak Canadian dollar is also a challenge to retain senior executives, designers, and top talent that is employable in other countries with a stronger currency and lower cost of living.

The quotes below exemplify some of these challenges.

> A lot of our work comes from industry, so with the oil slowdown we're seeing way less work…They (production workers) find other jobs, and when I call them up when work picks back up to ask if they want to come back, they've found something else – something not in sewing at all, so we've lost a worker from the industry completely.

> Our employees, our sewers, actually have a lot of power. We pay them significantly better than minimum wage because skilled sewers is in very short supply and we need to keep them so we are able to operate. Most of our production workers are new Canadians. We'd gladly hire more, especially if they have received training abroad, and need to work upon arriving in Canada.

4.8.7 Best Practices to Help Retention

Both the employer survey and key informant interviews asked employers whether they utilize any best practices in retaining employees at their firms. Open-ended answers on the survey were reviewed and several key themes or practices emerged from the data. These included: offering competitive wages and salaries; creating an attractive work environment; and offering job and professional development opportunities. The quotes below were taken from both open-ended survey questions and key informant interviews.

> Annual review and wages increase. The company pays tuition for all training courses related to job improvement position. Profit sharing.

> Offer an attractive compensation package and desirable company culture. Where applicable, provide pathways for advancement within the company.

> Traditionally the apparel industry has not paid as well as other industries requiring similar education backgrounds and skill levels. What was attractive about the industry was the lifestyle and work/life balance we could offer. In recent years, that has not been enough. With the cost of living in Vancouver and the high demand for these types of positions, we're having to offer much more competitive salaries as well.

Interestingly, Gen Y's findings on employee satisfaction and engagement did not reflect what employers believe they are offering to employees. When asked about the aspects of their jobs that gave them satisfaction, the highest scoring items were intrinsic aspects of the work, such as, "I like the product my company produces." The lowest scoring items focused on the extrinsic aspects of the work where employers believed they were employing best practices, such as, "My salary accurately reflects the work that I do," and, "There are effective training programs in place for new hires here." The table below summarizes the items which received the highest and lowest overall satisfaction scores among apparel sector employees that completed Gen Y's survey.

Table 4.24: Employee Satisfaction with Aspects of their Employment and Work Environment

Highest Overall Satisfaction Scores	*Lowest Overall Satisfaction Scores*
I like the product my company produces.	My current employee benefits plan meets my needs.
My work is essential to the financial sustainability and growth of the company.	I value monetary rewards over all other incentives.
I am good at my job.	My salary accurately reflects the work that I do.
I would recommend this company to friends as a great place to work.	I have sufficient opportunities to work remotely.
My work here matters.	There are effective training programs in place for new hires here.

Source: Gen Y Inc. "BC Student and Apparel Sector Values and Experiences Report" June 2016

INDUSTRY STORIES

GLOBAL TALENT ADDS STRENGTH

There is a critical talent shortage in the vertically integrated apparel industry. The global apparel labour force is small and highly competitive. It takes a long time for individuals to gain experience and build skills. In British Columbia, apparel businesses are growing so quickly that it is hard to find the talent they need to sustain continued growth. Sometimes recruiting someone internationally is the only option.

When a company is allowed to bring in top talent internationally, quite often, it can lead to further growth and creating more jobs for Canadians not to mention other benefits to our communities.

An originator brand with its roots firmly planted in Vancouver, lululemon has been leading the market they created through a unique combination of quality fabric, fit and function since 1998. As a design-led brand, the company's passion for innovation has always been at lululemon's core, and tapping into the best in global R&D talent continues to be an integral part of lululemon's product future.

In 2012, lululemon went in search of a leader to develop and staff its Whitespace Workshop, an in-house advanced R&D space that breaks the boundaries of a traditional research and development lab. They found the ideal candidate in Dr. Tom Waller, a key contributor to the UK-based Sports Technology Institute. Tom's numerous innovations in the sporting goods industry had been tested on the global stage with projects supported by many of the world's largest athletic brands. His numerous successes assisted in breakthrough consumer products, international publications, gold medals, world records and championship titles for several Olympic & Paralympic teams, Soccer and Rugby World Cup tournaments and for the NBA. Ultimately, Tom's unique understanding of physiology and biomechanics and his ability to translate this knowledge through technological application enabled lululemon to fast-track and integrate advanced prototyping, environmental simulation, human performance assessment and materials testing for all aspects of the brand's technical athletic apparel.

Today as Senior VP of Whitespace, Tom leads a 40-person strong, international team of both seasoned and junior inventors, engineers and scientists committed to building lululemon's future guest experience through the discovery and application of industry-shifting initiatives. Tom's contributions since joining lululemon have extended far beyond the company's headquarters. The competitive triathlete gives back to his Vancouver community, serving as an executive board member for the children's sports charity ProMotion. A two-time TEDx presenter, Tom was recently appointed to the International Sports Engineering Association executive board and is also a member of the editorial board for the Journal of Sports Engineering & Technology. Perhaps most importantly for lululemon's future, as a faculty instructor for Technical Apparel Design at Kwantlen University, Tom continues to attract and top local talent to his growing team.

Another great example is David Labistour. He assumed his role as Chief Executive Officer of Mountain Equipment Co-op in January 2009. His passion for the outdoor activities brought him to Canada and his extensive experience in the product development and retail sector make him ideally suited being a leader in British Columbia's apparel cluster. He came to Vancouver from South Africa and initially worked at Aritzia leveraging his decades of experience gained at companies such as Adidas and Woolworths. Under his tenure MEC has grown significantly creating more than 700 new jobs between 2009 and 2015.

Tom, David and their families are proud to call Vancouver home. Canada and British Columbia have both benefited tremendously from having these gentlemen, and many other new Canadians, as part of our apparel cluster.

Photo: Lululemon

INDUSTRY STORIES

ELEANOR AND ELVIS

Usually when you hear “Elvis” you think of Las Vegas. What about Nanaimo? The Vancouver Island city is home to Eleanor von Boetticher’s Pro Elvis Jumpsuits, the leading costumer for 80,000 Elvis impersonators and professional tribute artists around the world. Founded in 2007, the team of 8 sewers makes ready-to-wear and custom jumpsuits, capes and accessories that cost upwards of $4,000. Some jumpsuits require as many as 5,000 individual embellishments, jewels set by hand, which can take up to 100 hours to apply. A finished suit can weigh around six kilograms.

Pro Elvis serves over 5,000 customers, many who by more than one jumpsuit per year. 75 per cent of its customer-base is in the U.S. and strong demand is also coming from Australia, Switzerland, Finland, England, Germany and Spain. Pro Elvis is truly an international business shipping to more than 30 countries.

Eleanor chose to become a seamstress because it is rewarding work. “Sewers are the final executers of the creative process.” In fact, one seamstress even changed careers from being a Registered Nurse.

Photo: Eleanor von Boetticher’s Pro Elvis Jumpsuits

ROLE OF IMMIGRATION

SECTION 5: THE ROLE OF IMMIGRATION

5.1 Role of Immigration in Addressing the Labour Market Shortage

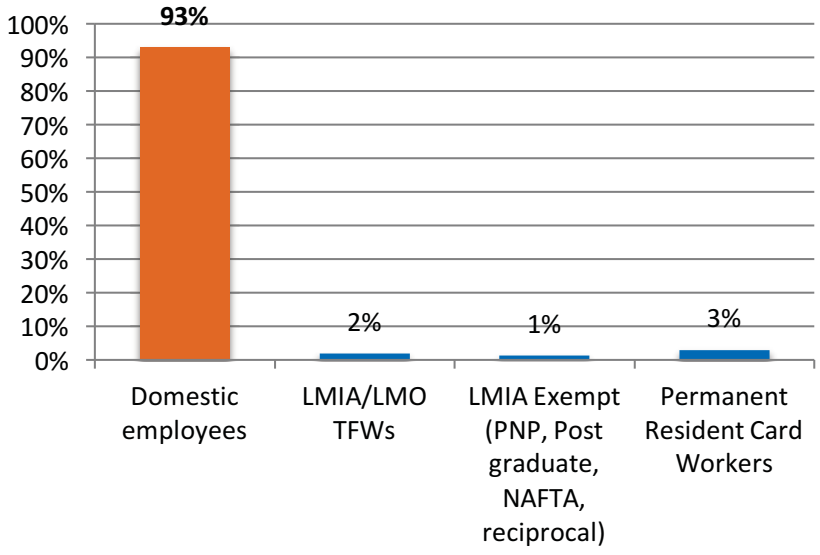
Two distinct trends, both shortages, in the labour market have been identified across a variety of firms in this project. Section 3.1.6 (Employer Outlook and Market Trends) discussed labour market trends potentially limiting growth in the apparel sector. Identified challenges relate to recruitment of both highly skilled executive occupations in product design and development, as well as a notable deficit of skilled sewers available to fill positions within the manufacturing industry.

Larger firms that are looking for experienced and skilled workers expressed that they are interested in bringing in qualified talent from elsewhere (primarily the United States and Europe) to fill critical positions which cannot be filled by local talent, due to the rapid growth of the industry and the local labour market experiencing challenges with an ability to keep pace with hiring for these positions. This is especially important when seeking executive and senior positions. The local apparel cluster does not have the depth (decades) of experience that many companies require as they expand internationally. Growing companies need to find seasoned international talent that will bring unique and specialized skills and experiences to a BC apparel enterprise. In fact, a number of current C-suite executives are international hires because sufficient local experience does not yet exist.

For these highly skilled positions, finding talent from outside of Canada is the only way to fill the labour gap.

As illustrated in Section 4.1.1 (Current BC Industry Workforce by Employee Type) and Figure 5.1 below, only a small proportion of the current workforce is composed of foreign workers.

Figure 5.1: Distribution of BC Workforce by Domestic and Foreign Employees



Source: Apparel Industry Employer Survey 2016

There is little risk that Canadians will lose out on jobs if foreign workers are hired. However, immigration remains a key strategic human resources tool to bring in specialized talent that does not exist in the local, or broader Canadian, labour market.

Employers seeking sewers, cutters and other manufacturing positions emphasized the important role that hiring of foreign workers has played in filling these roles in the past. A large majority of the workforce at each of the workplaces was composed of immigrants. Employers noted, however, that due to the rapidly increasing cost of living in Vancouver, new immigrants to the region tend to be more affluent and less in need of a job, and therefore hiring of foreign workers is no longer a reliable source of labour for these positions and only about 6% makeup the current workforce (see section 1.1.1). That being said employers seeking workers for semi-skilled and skilled trades realize that local residents and youth do not generally pursue these careers meaning immigration remains the only viable solution to fill the vacancies.

Offering employment through programs that promote permanenet residency, and ultimately citizenship, is generally preferred as talent will then likely remain in the cluster and promote sustainable growth, even if they switch employers.

5.2 Temporary Foreign Workers

A few employers also noted that they do not make much, if any, use of the TFW (Temporary Foreign Worker) program due to recent changes to the program and increasingly stringent requirements to search for local Canadian employees first.

Employer recruitment and selection processes are considerably delayed if an employer wishes to hire for occupations using the TFW program. Restrictive and time consuming requirements of this program, as well as costly application fees discourage employers from utilizing this to broaden their accessible labour pool. The application process for employers to hire through the TFW program involves several steps.

First, the employer is required to conduct an LMIA (labour market industry assessment) that is then submitted to Service Canada for approval (this process often takes 4-6 weeks) before they can proceed with hiring a skilled or unskilled immigrant. However, if the wage rate exceeds $86,000 it usually takes closer to 3 months to process the LMIA.

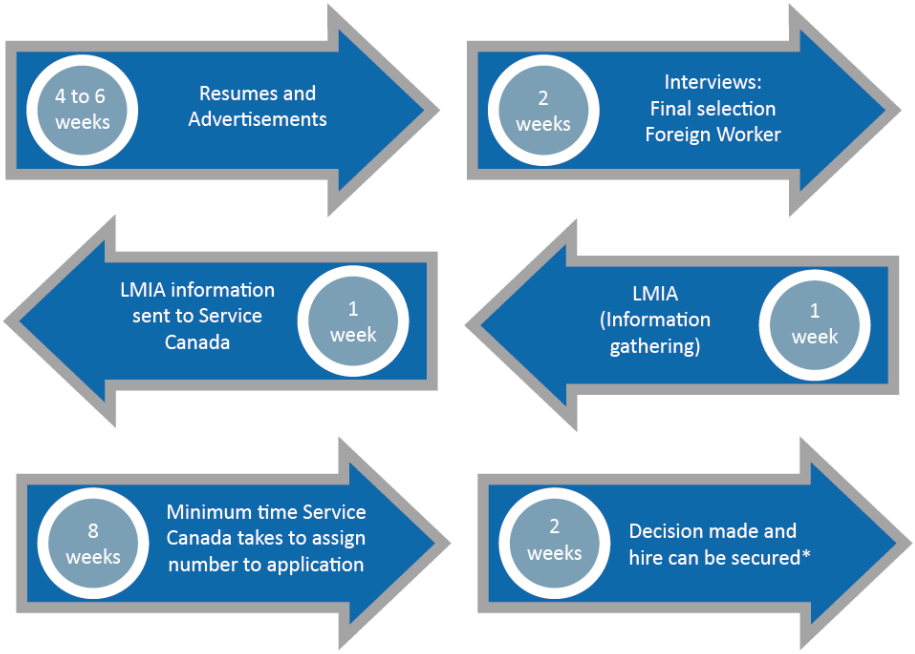
Next, the employer is required to run job advertisements in specified federal domains, and offer the median wage as the starting wage for the position, the median wage must take into account both federal, regional and provincial averages, which can be challenging as median wages fluctuate based on labour market conditions and occupational supply and demand. Posted job advertisements that the employer uses to support its LMIA application(s) must strictly adhere to the NOC (National Occupational Classification) that the position is categorized under, tasks listed in the job advertisement may not deviate from the NOC specifications. This can be challenging for employers as the NOC is the only

descriptive criterion accepted; yet NOC specifications are often too broad or vague to achieve qualified hiring decisions. For example, many occupations in textile manufacturing are classified under NOC code 7311 (construction millwrights and industrial mechanics) which is not an applicable category. Sometimes publishing wage rates also releases highly competitive information about a company and is not ideal.

Employers are also required to pay application fees of approximately $1,000.00 per employee application, and if the LMIA conducted returns an unfavourable outcome to the employer (which is beyond the employer's control), these costly application fees are not waived and the result in a lost budgetary investment.

There are also cases where new grads from international schools (i.e. Textile Science Degree program) have yet to gain work experience, but are educated in programs that are not available in Canada. They might not qualify under the program.

Figure 5.2:Typical Time of Process for Hiring a Foreign Worker[13]



*If any issues arise during the application process it must be started again. High-level 2-3 months should be highlighted!

Some exceptions apply, for example graduate students and those in very specific highly skilled occupations can at times obtain exemption from the LMIA process, however the challenge for many employers lies in selecting the most qualified candidate for a position being offered that may be an immigrant, yet the labour demand requires recruitment and hiring decisions to take place quickly.
This often results in employers hiring less qualified candidates because the TFW application process is so arduous and restricted, with no guarantee of a positive outcome. [14] Candidates

[13] WorkBC. *Temporary Foreign Workers*. Retrieved August 8, 2016, from https://www.workbc.ca/employer-resources/your-workforce/temporary-foreign-workers.aspx#anchor5

drop out due to the uncertainy of the immigration process and length of time so Canadian companies are not able to be as competitive with aquiring new talent switfly.

Only one of the companies which did manufacturing within Canada noted much of a presence of temporary foreign workers in their workforce. Among those companies that chose not to employ temporary foreign workers for manufacturing jobs, employers cited two main reasons: 1) the TFW program has been made more complicated and burdensome since the scandal related to the food services industry and the subsequent overhaul of the system in 2014; and 2) overseas workers with sewing skills have many reliable employment options for countries in which to work in (e.g., a trained Chinese sewer may stay in China, or go to another country such as Japan or somewhere in Europe) and it can be difficult to recruit TFWs to come to Canada, and particularly to Vancouver, due to the higher cost of living. These companies did note, however, that they did tend to employ a large proportion of permanent residents, particularly those that immigrated from countries where garment manufacturing is prominent (e.g., China, Indonesia), and that these employees had received training and experience in industrial garment manufacturing prior to working with these companies in Canada.

Furthermore, companies grapple with the dilemma of work permits versus residency. A new recruit from Europe might not want to become a Canadian resident or citizen. However, conditions remain very strict under the TFW program. Employers cannot promote a foreign worker nor pay a raise because it changes the terms of their work permit and would force a reapplication. Permanent residency is almost preferred because it allows the worker more flexibility if they want to change employers, if they want to start their own firm, or contribute in other ways to the economy.

In a global economy, labour needs to flow more readily so that companies can compete globally. Canada loses out many times as talent gets snapped up by other firms in the United States, Australia and elsewhere. Bizarrely, BC-based companies have found it easier to relocate and establish international recruits at their offices in Sydney, Hong Kong and San Francisco than in Vancouver to avoid losing talent they wish to bring into their organization. In other cases, during informant interviews examples were shared of workers having to work from home in places diverse as Moscow, Tokyo and London while waiting for the right to work in Canada.

Status quo in Canada's immigration policies are not ideal and a system that is more responsive to industry needs, such as creating strategic fast-track categories, is needed.

[14] WorkBC. *Temporary Foreign Workers*. Retrieved August 8, 2016, from https://www.workbc.ca/employer-resources/your-workforce/temporary-foreign-workers.aspx#anchor5

INDUSTRY STORIES

COLLABORATION BETWEEN ACADEMIA AND INDUSTRY KEY TO SUCCESS

Lee Holman, Creative Director at Lululemon. Sarah Burton, Creative Director at Alexander McQueen. Phoebe Philo, Creative Director at Céline. The common thread among them: they are all alumni of Central Saint Martins College of Art and Design in London, United Kingdom, an internationally-renowned school in fashion design. Its secret sauce – intensive industry collaboration.

Likewise, Kwantlen Polytechnic University (KPU) in British Columbia offers students lots of opportunities to experience first-hand "life in the real world". The school has four apparel-related programs, which embed industry experience in the form of practicums, mentorships, collaborative assignments, R & D opportunities, and more, in their curriculum. Students at KPU's Wilson School of Design complete mandatory practicums and work experience in major BC apparel companies like Arc'teryx, Aritzia, Lululemon, Kit and Ace, MEC, Westcomb, and Tamoda. Quite often, these interns are offered jobs before they even complete their studies.

Additionally, the school hosts annual events, such as Designer Spotlight (at the request of the local industry), which give students a chance to showcase their in-depth portfolios and research and business models. These events provide industry an excellent opportunity to recruit. In fact, KPU graduates have been integral to design teams at Lululemon, Kit & Ace, MEC and more. As well, many KPU alumni can be found in leadership roles in almost all major apparel firms in the Vancouver area and in many leading companies globally. Such practical learning, made possible by the school's excellent collaborative efforts with the industry, has produced numerous notable young designers, such as Nicole Guzzo, Natasa Nikolov, and Leah Klessinger.

Industry partnerships are integral to the student experience and success at KPU. Often, industry approaches KPU's Wilson School of Design to assist with a design challenge. In addition to providing an ongoing stream of qualified, experienced graduates to the apparel industry, KPU students continue to make a difference as designers of the future, with an eye on marrying technology with design to create innovative, functional apparel.

For example, Technical Apparel Design graduate Eva Garcia Mockford has developed prototypes of clothing that emits light through laser-cut patterns. This application of wearable, functional technology would have a positive impact, as an example, for pedestrian safety. Pedestrian visibility is often an issue during the dark winter months in British Columbia, and light-emitting apparel could ultimately save lives.

Interdisciplinary approaches are encouraged and supported at KPU. Product Design alumnus Jaymes Williams and Fashion & Technology alumna Laura Hutchison teamed up during the last year of their studies at KPU. The pair designed, tested, and developed an innovative Cooling Vest to support paraplegic athletes participating in Team Canada's Wheelchair Rugby team at the 2016 Rio Paralympics. This innovative garment will assist in providing athletes with disabilities with a means to regulate their body temperature, which is typically a medical challenge faced by people with spinal cord injuries

Clearly, work-integrated learning is important in giving students the practical skills they need to succeed in their careers. As well, the experience also plays a part in shaping their young minds and guiding their own take on design in the vast, creative world of fashion and apparel.

Photo: KPU

> BC's post-secondary institutions are charting new paths to develop talent to support industry growth.

6

EDUCATION AND TRAINING

SECTION 6: EDUCATION AND TRAINING

6.1 Education and Training

In order to have a better understanding of the current opinion of BC's apparel manufacturing companies with respect to education and training of employees in the province, survey respondents were asked their level of agreement (on a scale of 1 to 5) with various statements.

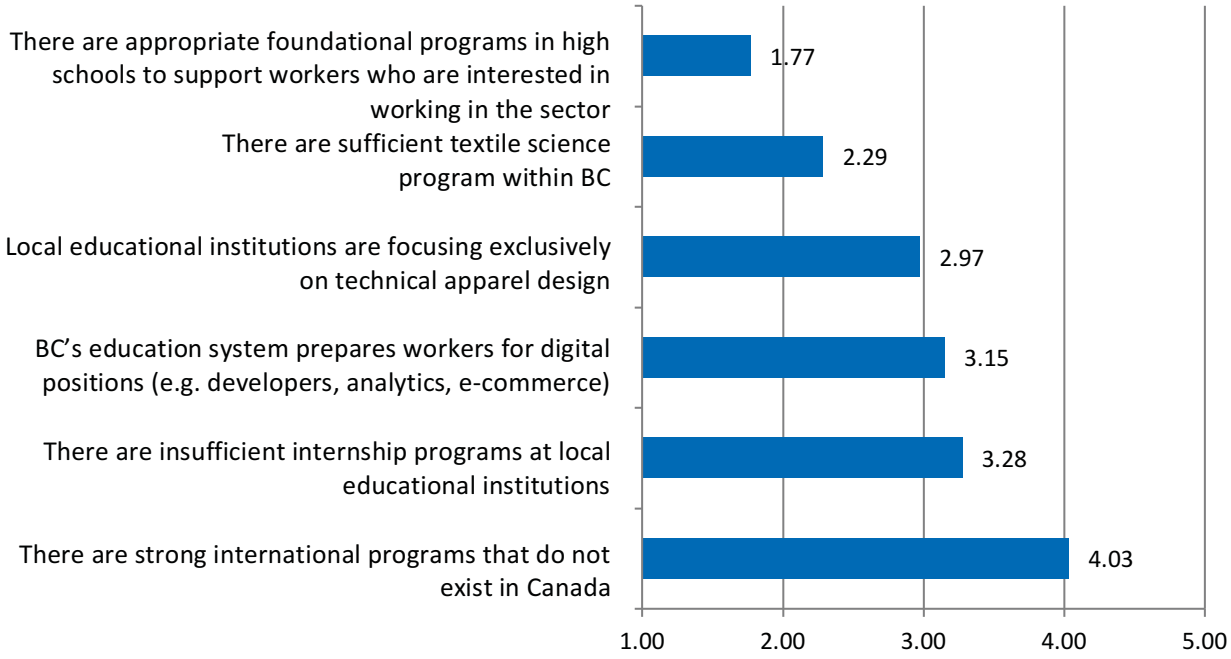
Figure 6.1 ranks the education related statements by mean score. What was discovered in the research was very little agreement that there are satisfactory programs at the high school level to prepare students who are already interested in working in the sector early in their education (mean score of 1.77).

Furthermore, there is an opinion that there are insufficient textile science programs within BC (2.29) and that within this area of education there is general disagreement that programs are focusing exclusively on technical apparel design (mean score of 2.97). There is a middling opinion that local programs *do not* offer sufficient internships or co-op programs in partnership with the industry in BC (3.28).

One area where company representatives moderately agree is in post-secondary institutions preparing workers for digital positions (e.g. developers, analytics, e-commerce) (mean of 3.15). This is important as the e-commerce occupation is the fastest growing of the nine key occupations in BC's apparel industry (Figure 4.13: Projection of Growth by Selected Occupations).

Respondents strongly believe there are successful international programs (4.03) that should be utilized as models to help steer the future of apparel manufacturing education in BC. Some of these international programs that are considered a success are examined in the following section and in greater detail in the appendices. The following sections also provide detailed analysis of domestic programs (both BC and the rest of Canada) that offer apparel related programs.

Figure 6.1: Level of Agreement With Local Education and Training



Source: Apparel Industry Employer Survey 2016

6.2 Summary of Available Programs and their Features

Malatest completed a scan of local post-secondary institutions offering apparel programs,[15] and conducted key informant interviews with a small sample of representatives of local private and public institutions. The purpose of this portion of the research was to gain a clearer understanding of the education options available to local talent wishing to begin or advance their education in apparel, and potentially identify any opportunities for better alignment between industry needs and educational offerings and/or greater collaboration between industry and educational institutions.

The scan of local apparel programs revealed that students pursuing an education in apparel have many options to choose from in BC. There are currently more than a dozen post-secondary institutions in BC that offer some form of an apparel program, including several public institutions such as VCC, Kwantlen Polytechnic University (KPU), and the Emily Carr University of Art and Design.

Further, there is a wide variety of program types available, ranging from certificate-level programs all the way to a post-baccalaureate diploma (offered at KPU). Post-secondary institutions in BC offer an extensive array of options for students and employees in the apparel industry to begin, continue, or upgrade their education. These programs also offer a

[15] For a comparative table summarizing each of the available apparel programs available at institutions throughout BC, please refer to **Appendix A**.

variety of areas of focus related to the apparel industry, including fashion design, merchandising, marketing, and sewing and production. Interviewees emphasized that the training provided at their institutions provided a strong background for a variety of positions within the apparel industry, although there were decidedly two "streams" to which students could apply themselves: business management and executive-type studies with an apparel focus, or an apparel and fashion design stream.

Specific job training for jobs such as sewers, cutters or other production workers did not exist at any of the institutions represented by an interview for this project.

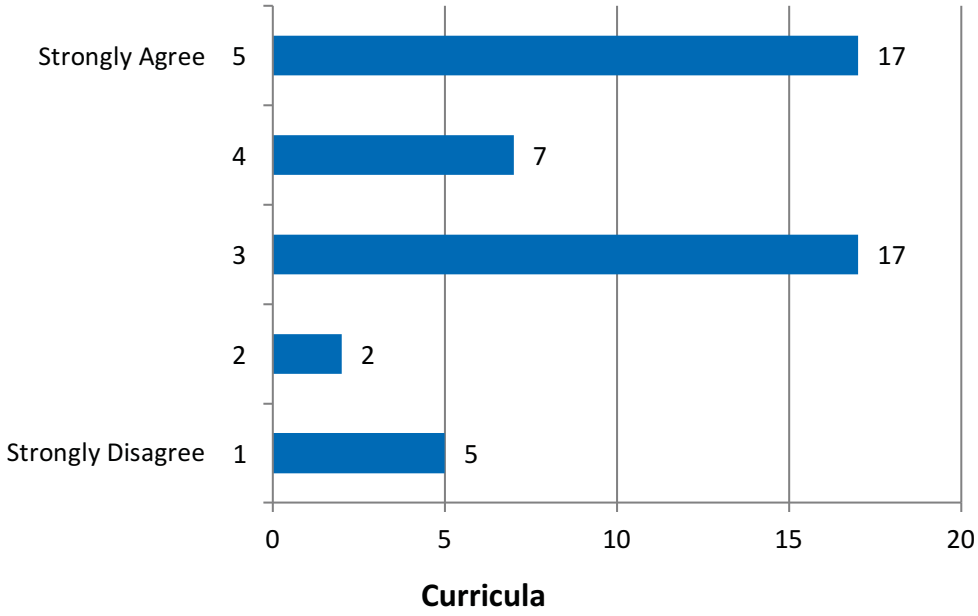
Program requirements for internships, co-op terms, or other work placements vary by institution. Some programs have formal requirements for work experience, such as a co-op term or formal internship with a company; others have informal requirements such as work experience in the fashion industry that could be satisfied through retail fashion work. Some other institutions did not have any work experience requirements for their programs at all. Programs at public institutions are more likely to have requirements for work experience, as are programs that take two years or longer to complete.

Few of the institutions reported official partnerships or formal internship arrangements with local apparel companies; those that do include Kwantlen Polytechnic University and MC College. It should be noted that apparel and design program at KPU has undergone significant changes in recent years. It has had a considerable expansion of course offerings and is currently constructing a new building to house the Wilson School of Design programming (which includes four apparel-related programs), research and development activities, and a centre of excellence.

Although there were few formal internship or co-op partnerships with local apparel firms, many of these colleges and universities work closely with local apparel firms when it comes to developing course content for their programs. Every interviewee noted that they had several representatives from local apparel institutions on their program advisory boards; it was not uncommon for some of the larger firms to be represented on most, or all, of these advisory boards among the representatives that Malatest spoke to for this project. Overall, this suggests that apparel firms are vocal and supportive of post-secondary institutions in developing course content that is responsive to industry's needs, although more could be accomplished in terms of developing a more formal co-op and internship placement system with a greater diversity of firms.

Despite the fact that both post-secondary institutions and apparel firms themselves indicated being highly involved in consulting on course and program content development at numerous institutions in BC, there is a perception among employers that there is a disconnect between the needs of the industry and the training options available at local institutions. Figure 6.2 illustrates employers' agreement that there is a disconnect between supply and demand for skills in the apparel industry.

Figure 6.2: Employers' Perceive in a Disconnect between Industry Needs and Current



Source: Apparel Industry Employer Survey 2016, n=48

Only a low proportion of respondents (14.5%) disagreed that there is a disconnect – in other words, they believe that industry needs and current curricula at local institutions are well matched in BC. A much larger portion (50%) of respondents (n=24) believed that there is a disconnect, and a further 35% (n=17) had no opinion on this issue.

This disparity – that so many employers believe there is a lack of alignment between industry and education, despite industry being heavily consulted regarding curriculum development at most schools – may be explained by the fact that among programs that exist, there is good alignment, but there is also a large demand for programs that do not exist anywhere in BC. Specifically, many of the larger firms hire graduates from international schools because of the perception that they gain technical skills not taught within local BC-based programs.

Furthermore, there is high demand for some form of industrial sewing and production program among many employers, particularly manufacturing firms that employ sewers and other semi-skilled workers to produce garments. The quotes below, taken from open-ended questions on the employer survey conducted by Malatest, illustrate this demand.

Note* most Canadian programs are 1-2 years while International schools highlighted in Appendix A have four year degree programs in fashion and masters programs.

> Develop an industrial sewing school where the graduates are fully trained upon graduation.

> The manufacturing sector should provide more training opportunities so they can enter into the work force with relevant skills. The majority of the young people coming out of universities want to be designers and they do not want to do the skilled work.

> The sector needs programs to provide sewing skills in order to preserve local manufacturing jobs and grow the economy.

An additional gap identified by employers was the absence of core business skills such as math and budgeting, strategic analysis and the basics of project management. Many apparel workers end up fulfilling project management roles and are expected by the employer to be able to support business planning, performing analysis, making cost-effective decisions, monitoring and reporting.

Finally, there were several institutions or programs among those examined in the jurisdictional scan that offered unique features or educational opportunities for students, which helped these institutions to stand out or create a niche in the apparel program market. For example, the Emily Carr University of Art and Design offers a course in design programs include curriculum for high-performance

6.3 Apparel Programs in BC

Several public post-secondary institutions in BC offer apparel programs and/or apparel components to broader design programs. These institutions include Kwantlen Polytechnic University, the University of the Fraser Valley and the Emily Carr University of Art and Design. A number of colleges also fall into this category such as VCC and Langara.

During the course of this project, both VCC and KPU undertook program reviews as part of the province's legislated curricula quality assurance process. This included engaging with industry to solicit feedback.

The University of the Fraser Valley's Fashion Design diploma program was also going to launch a program review. However, the faculty decided to postpone any review until after the BC Apparel Labour Market Research project is complete. The program is currently suspended; however, the university continues to offer courses to existing students in the program so they may complete their diploma and graduate. UFV is considering options to develop a full baccalaureate degree in Fashion Design, although this process is still in preliminary stages and has not received all necessary approvals from the Ministry of Advanced Education.

There are also numerous private post-secondary institutions which offer a variety of apparel programs, including the Art Institute of Vancouver, LaSalle College Vancouver, and the Vancouver School of Art and Design and MC College in Kelowna.

Finally, there is one apparel program at the public secondary school level available at Eric Hamber Secondary School, with courses on Fashion Design and Technology.

The levels of education available through these institutions vary. Private post-secondary institutions offer certificates and/or diplomas only; education at the baccalaureate level and higher is only available through public institutions in BC. Baccalaureate degrees in fashion, apparel and design are currently offered only through Kwantlen Polytechnic University and the Emily Carr University of Art and Design. Kwantlen is currently the only institution in BC to offer post-baccalaureate studies (a post-baccalaureate diploma in technical apparel design).

Work experience requirements vary considerably by school. Some schools have no formal work requirements (e.g., Langara College), some require brief work placements (e.g., University of the Fraser Valley required a one-week / 40-hour work placement), and some require longer work placements for completion of the program (e.g., MC College requires a four-week internship).

Although data on post-secondary institutions' admissions, graduation, and transition (i.e., found work) rates are collected by the Ministry of Advanced Education in BC, these data are not publicly available at the highly granular, program level. Therefore, there is no existing information regarding the availability or success of these programs in terms of the number of seats available, the proportion of students who successfully complete the program, or the proportion of graduates who find work in the field following graduation. This remains an area of opportunity to establish systems to annually track graduate employment.

To supplement this lack of information, Malatest undertook a brief ad hoc survey with representatives from each institution listed in the table in **Appendix A**. Not all institutions responded meaning the authors were not able to provide detailed information on these measures of interest for all existing design and apparel programs in BC.

6.4 Educational Program Outcomes

As part of the research, post-secondary education and training institutions were asked to provide information as to enrollment, graduation and employment rates for graduates in fashion and apparel related programs. No program provided statistics as part of the quantitative review resulting in follow-up interviews being scheduled with post-secondary stakeholders.

Key informant interviews with representatives from post-secondary institutions were asked questions about their student population and student outcomes, in terms of graduation rates.

Not all interviewees were able to provide specific numbers on the number of entrants to their programs each year. However, among those that did, program capacities ranged from 25 to 50 per year; it should be noted that some of these interviewees stated that their programs were not always at capacity (meaning they had seats available in programs that were not being filled). It should be noted that these numbers are *per program*; for institutions that offer more than one apparel-related program, capacities may be higher in total.

Estimates of the number of domestic vs. international students varied. Notably, public institutions reported that international students were in the minority among their students (ranging from 5% to 20%), whereas private institutions reported much higher proportions of international students (ranging from 20% to 60% international).

Reports of graduation rates from programs ranged from 50% to 100%, with all interviewees acknowledging that it varies slightly from year to year.

6.5 BC Post-Secondary Graduate Analysis

The research team also investigated enrollment data available from graduate outcome surveys managed by BC Stats. Analysis of enrollment by program suggests that BC colleges/universities have 2 programs within the Classification of Instructional Program (CIP) hierarchy of interest to the fashion/apparel sector, namely:

CIP Code: 50.0407 - Fashion/Apparel Design
CIP Code: 19:0999 – Sewing

Review of enrollment/graduation data indicates that no students graduated from a sewing program (CIP Code: 19:0999) during the period from 2013 to 2015. This is to be expected as Sewing is not typically offered at a college or university. As detailed in Table 6-1 below, there was also very limited numbers of students who graduated in BC with either a college certificate or university degree in fashion/apparel design (CIP Code 50.0407) over the past three years.

Table 6.1: Graduation and Employment Rates for Fashion/Apparel Design (CIP Code: 50.0407) Avg. 2013-2015

	Average # Graduates/Year	In Labour Force	Employed in Field of Study	# of Graduates working in Apparel
University Programs	32	96%	80%	26
College Programs	16	95%	80%	13
Total	48	96%	80%	39

Source: BC Student Outcomes, Survey of BC Baccalaureate and College Graduates. Averages for 2013 to 2015.

As detailed in Table 6-1 above, it appears that the BC College and University system produces only 48 graduates per year in occupations specific to the apparel/fashion sector. Of these graduates, only 39 eventually find employment in the sector. As highlighted below (Table 6-2), this supply of BC trained graduates is well below the number required to fill existing vacant positions, (127), or meet the projected future demand (new hires) of 79 workers per year for the specific apparel occupations that would likely employ entry-level graduates from such programs.

Table 6.2: Demand for Selected Fashion/Apparel Workers Selected Occupations

	Current vacancies	# of new hires/year	Total
Fit generalist engineers	31	22	53
Pattern makers	14	19	33
Product designers	82	38	120
Total	127	79	206

Source: Apparel Industry Employer Survey 2016.

6.6 Apparel Programs Outside of BC

A cross-jurisdictional scan of English-language apparel programs outside of BC was also conducted, to identify exemplary programs in other parts of Canada and internationally. All of the programs identified in the scan were a minimum 2-year diploma program, with many of the same schools offering baccalaureate and master's-level degrees in apparel programs.

Many of these "world-class" programs have strong partnerships with industry, not just in work placements and consultation on curriculum, but also in innovative endeavours and senior-level project work. Some examples of this include the Fashion Zone Incubator at Ryerson in Toronto, which provides support to fashion-based entrepreneurs through access to industry equipment and mentorship by industry leaders, and research labs at Parsons Design School in New York, which offer opportunities for students to connect with industry leaders and community organizations to conduct research and design products that respond to a variety of real-world needs. North Carolina State is also globally recognized as having the best textile science program and nothing comparable currently exists in Canada.

It was this connection and collaboration with industry leaders that was acknowledged and emphasized by all educational institution representatives when asked about best practices at other institutions. Interviewees emphasized that these types of collaborative opportunities provided invaluable enrichment to students' education by exposing them to novel problems to be solved by utilizing better design and cutting edge technologies. The networking opportunities with industry leaders throughout the duration of the students' participation in these projects were also highlighted as invaluable.

Furthermore, examples were cited of how other faculties or departments in colleges and universities engaged with apparel companies to promote strong business practices or transfer innovative processes, technologies and materials. This was not found to be strong in BC.

Malatest struggled to gain sufficient program data from post-secondary institutions to provide an accurate profile of entrants, capacity and graduates. Malatest was also unable to complete a full competitive jurisdictional analysis nor an inventory of government interventions in other apparel clusters.

6.7 Summary of Education and Training Programs

BC has a large number, and significant variety, of apparel and design programs available to students ranging from certificate to post-graduate level education. These programs have been designed with considerable input from industry leaders regarding the content of curricula, and as a result incorporate industry-relevant technologies such as learning to use the Gerber and Adobe design programs.

Key informant interviews suggest that these programs may be improved by following the best practices of other leading institutions, both within Canada and internationally, by incorporating greater opportunities for collaboration with industry leaders. Such collaborative projects would benefit both students, by enriching their education with real-world experience, and businesses, which would have the opportunity to explore novel and innovative solutions to design and manufacturing problems with support from educational institutions.

However, there still remains a strong perception among employers that there is a large gap between what skills industry needs and the curricula available in apparel programs in BC.

Opportunities exist to build stronger partnerships between apparel companies and other departments within post-secondary institutions to strengthen business practices, supply chains and product development.

Furthermore, there are no programs available for industrial sewing and garment production, despite the fact that this is one of the most in-demand jobs in the industry and massive attrition is expected within the next ten to fifteen years due to an aging workforce.

Table 6.3 Education and Training Gaps by Occupation

NOC	Occupation Title	NAICS	Skill Level	Alignment with Key Occupations	Education Required	Gaps in Education/Training
0911	Manufacturing managers	313, 314, 315, 3162, 3169	0	Apparel Quality Professionals	Bachelor's, MBA, extensive experience	The market is in demand for managers who may have educational backgrounds not pertaining to the apparel industry (ex: MBA). However, extensive experience within the industry is a greater prerequisite for executive positions, which educational institutions cannot provide.
0016	Senior Managers	313, 314, 315, 3162, 3169, 41411, 41412, 448, 54149	0	Executives	Bachelor's, MBA, extensive experience	
2174	Computer programmers and interactive media developers	313, 314, 315, 3162, 3169, 41411, 41412, 448, 54149	A	E-commerce Professionals	Bachelor's	
2233	Industrial engineering and manufacturing technologists and technicians	313, 314, 315, 3162, 3169	B	Fit Specialist Engineers	Diploma	Many programs, offering diplomas, are producing graduates who may enter in professional roles with skill level B. Presently however, workers with this skill level do not meet the demands of the labour market; employers are either looking for employees with skill level C (making these individuals with skill level B overqualified), or for employees with extensive experience and education (skill level A or 0).
1215	Supervisors Supply Chain	313, 314, 315, 3162, 3169, 41411, 41412, 448, 54149	B	Supply Chain / Logistics Professionals	Diploma	
5243	Theatre, fashion, exhibit and other creative designers	314, 315, 3162, 3169	B	Product Designers	Diploma	
6222	Retail and wholesale buyers	3169, 41411, 41412, 448, 54149	B	Merchandisers	Diploma	
9442	Weavers, knitters and other fabric making occupations	313, 314, 315, 3162, 3169	C	Pattern Makers	Experience	There has been an observable decline in courses for basic sewing over previous years. Currently, colleges do not provide programs specifically dedicated to industrial machine operations in apparel manufacturing. In BC, small private non-accredited organizations offer professional sewing classes, however employment success after course completion is not widely recorded.
9446	Industrial sewing machine operators	314, 315, 3162, 3169	C	Sewers	Experience	
9447	Inspectors and graders, textile, fabric, fur and leather products manufacturing	313	C	Textile Sourcers	Experience	

Source: HRSDC 2011 National Occupation Classification website. Retrieved August 8, 2016, from http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/Welcome.aspx and key informant interviews.

Skill levels in the above table are defined as follows:

- **0**: Skill level A in a management position;
- **A**: Occupations typically require a university education;
- **B**: Occupations typically require college education or apprenticeship training;
- **C**: Occupations typically require secondary school and/or occupation-specific training; and
- **D** (not in table): On-the-job training is typically provided for these occupations.[16]

[16] Government of Canada. *National Occupational Matrix 2011*. Retrieved August 8, 2016, from http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/html/Matrix.html

INDUSTRY STORIES

YOU GOT A JOB IN RETAIL?

When most parents and job seekers think of apparel, it is likely their first impression is retail. The scope and size of British Columbia's apparel industry is not well known, and yes, retail might be your first glimpse of the industry. But it does not have to stop there.

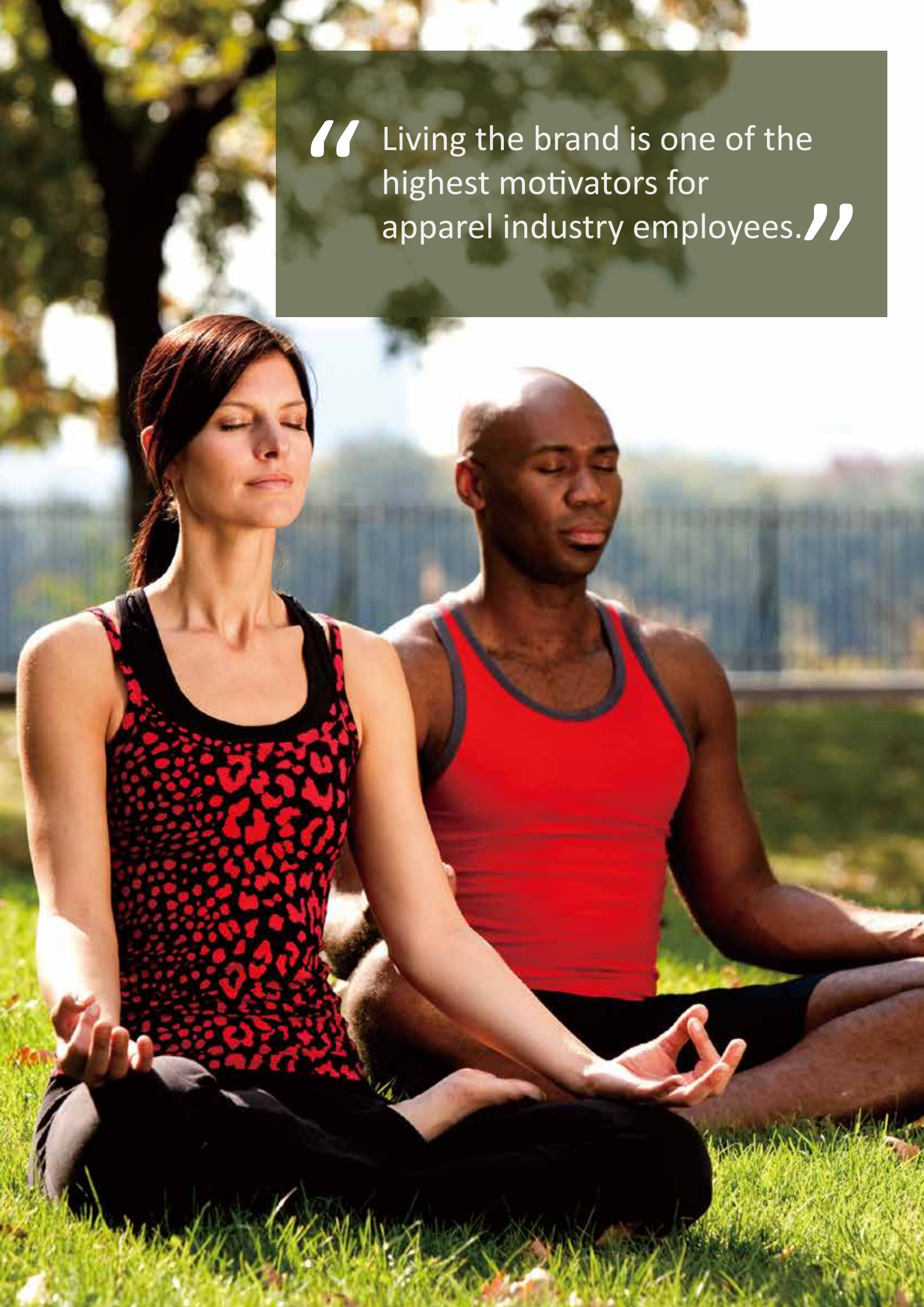
If you think working on the retail floor selling clothes is a dead-end job, well, think again. There are numerous fashion world luminaries whose careers had humble beginnings in retail. It is interesting to take a look at a few of their career trajectories.

The year was 1987. Jennifer Wong, then a student at the University of British Columbia (UBC), took a part-time sales associate position at Aritzia to make a little extra cash. An economics major, she had thought she would transition into the financial sector upon graduation. But Aritzia offered to promote her and she progressed to managing the brand's shoe division. From there, her career path was anything but boring. Wong went on to become vice-president of Corporate Support Operations and then to become Chief Operating Officer (COO) in 2007. She made significant contributions towards the company's growth by implementing its Enterprise Resource Planning (ERP) system and launching its e-commerce path. Since 2015, Jennifer Wong is President and COO of a leading $ 570 million company with 2,500 employees. She is also playing a key role in a much-anticipated initial public offering (IPO) which will take the company to the next level in its growth strategy.

Similarly, Pippa Morgan also took on a part-time retail sales job at Aritzia in 1992. She was still a UBC student and was planning to pursue a law degree or an MBA when she graduated. Like Jennifer Wong, she was offered a full-time opportunity that led to a path of successive increases in responsibility. She was promoted to Vice-President, Retail Operations in 2001. In 2010, she became Executive Vice President of the Retail Division at Aritzia managing 75 stores across North America, opening 21 in the last 2 years.

If you care to talk to people in the fashion industry, you'll hear that the retail floor is a great training opportunity, especially for those who hope to start their own clothing label and/or retail business. According to Morgan Young, who is currently the East Coast District Director for Kit and Ace, working on the sales floor is actually an invaluable experience because it allows you to "really understand the culture, the clientele, all the different brands and seasons and cycles." It also allows you note your skill gaps and work towards gaining the required knowledge. Young was a personal shopping assistant at Holt Renfrew before she rose through the ranks to become a brand strategy manager in 2011.

Photo: ENVATO


“ Living the brand is one of the highest motivators for apparel industry employees.”

YOUTH ENGAGEMENT

SECTION 7: YOUTH ENGAGEMENT

7.1 Youth Work Values and Expectations

Building a sustainable apparel cluster also means creating a steady labour supply. Once curricula is adjusted to align with industry needs the next challenge is attracting youth to participate in these training programs in order to ultimately pursue a career in BC's, and the world's, apparel industry.

It became evident at an early stage of the project it would be important to test youth perceptions of the industry and how their preferred career characteristics matched up with the culture of the apparel cluster in British Columbia.

7.2 Work and Life Values and Expectations Among Youth

To complement research into the current labour market trends and challenges in the apparel sector, the BC Alliance for Manufacturing hired Gen Y Inc. to conduct research into youth values and expectations for their future careers. Gen Y engaged youth and employees through surveys and focus groups.

The findings from this research are presented here, to provide detail and context on what the next generation of talent will be looking for in their careers and how the apparel industry can be best marketed to appeal to these values.

7.2.1 Youth Survey

Students throughout BC were provided an anonymous survey designed to determine which activities they enjoyed most, as well as how they liked to learn and be treated. These would be predictors for fit with various role types in the apparel industry.

In addition to Likert Scale questions, students were also asked open-ended questions that allowed them to expand upon their thoughts on what they enjoyed most, and what they knew about and how they perceived the apparel sector.

The questions were formulated in order to gain a firm understanding of common core values in a multitude of areas.

- Preferred interaction styles
- Preferred methods of learning
- Values and desired experiences
- Characteristics of dream job
- Specific feelings toward the apparel industry/manufacturing
- General knowledge of the apparel industry

7.2.2 Focus Groups

In addition, a total of eight student focus groups were conducted in order to develop an in-depth, real-time understanding of the student's perspectives, with a more specific focus on employment and what is valued most in a prospective job.
The main objectives of the focus groups included:

- What successful work means
- An ideal work day
- Where to receive job information
- Qualities valued in a job
- What is looked for in leadership
- Most disliked qualities in a job
- Thoughts on the apparel industry as a career choice

The objective of the student analysis was to better understand how the apparel industry could more effectively communicate with the next generation of talent, while promoting a career in the apparel sector. In understanding what it is that students -- as up-and-coming talent -- value and want to experience in a career, recruiting and marketing documents can be tailored to help close the talent gap in the industry.

7.2.3 Youth Drivers

In terms of what students value most in their lives generally, and specifically what they value in their anticipated future careers, the five highest-valued items, overall, among respondents were:

- Going new places;
- Spending time outside;
- Deciding when I want to do things;
- Staying up late; and
- Doing things I've never done before.

There is a lot that can be extracted from the values provided.

"Deciding when I want to do things," and "Staying up late," are quite similar in ways, as they are both attributes of autonomy. Both consist of self-management of time, and suggest that students are interested in a flexible schedule.

"Going new places," and, "Doing things I've never done before," are indicative of the willingness to learn.

The section about students' expectations for their future career asked respondents to select five key attributes, from a list of 29 options, that they would consider important when

looking for their dream job. The table below shows the highest and lowest valued attributes in a career, as reported by respondents to this survey.

Table 7.1: Highest and Lowest Valued Attributes in a Dream Job

Highest Valued	*Lowest Valued*
Excitement	Predictable
Creativity	Sustainable
Interesting	Guidance

Source: Gen Y Inc. "BC Student and Apparel Sector Values and Experiences Report" June 2016

The most valued attributes were those that came with a high level of variability and creativity, allowing for high levels of excitement and motivation. On the opposite end, the lowest valued attributes, "predictable," and "guidance," allow low levels of autonomy, mastery, and purpose.

As a result of the keywords that were identified in the analysis, there is a clear recommendation to tell the stories of those people in the sector that view their jobs as exciting, creative, and interesting. Instead of having a focus on the task itself, it is important to talk about how the tasks and interactions of people make employees feel, and then to tell that story to prospective employees.

7.3 Youth Perceptions of the Apparel Industry

The survey included a set of statements that were directly related to the apparel industry, as well as several questions related to the manufacturing industry as a whole. Students were asked to rate their agreement with each statement. These included items such as, "I like fashion and design," "I like clothing and clothing design," and "I like putting things together." The results yielded a strong opposition toward apparel. The second and third lowest valued questions, at 54% value score each, were in regard to liking fashion and design, and liking clothing and clothing design. Despite the fact that the findings illustrated ambivalence or disinterest toward fashion and clothing, there is an opportunity to focus on the "building" aspect of the job, as it is a core competency for many jobs in apparel.

At the end of the survey were two open-ended questions that could be answered and expanded upon with the students' own perceptions. All of the answers were sorted through and analyzed to find similarities in answers in order to provide the apparel industry with constructive feedback.

The first open-ended question was, "What do you want to be when you grow up and why?" Only two of 414 student respondents in Grades 8 to 12 stated that they intend on going into the fashion/apparel industry. The first student wants to become a fashion designer because she "loves making people beautiful". The other student loves the idea of the job because of her passion for the field and how it differs from week to week.

The most common replies consisted of: mechanic, policeman, athlete, engineer, and doctor. These career choices, when compared to the attributes chosen, align well with what resulted as the three highest desired values: excitement, creativity, and something they are interested in, which shows a high level of curiosity and desire to learn.

The second open-ended question asked was, "Is apparel an exciting and attractive work place for future consideration? Please tell us why." The majority of the students said 'no it isn't' due to reasons such as: it's boring, lack of interest, predictable, don't enjoy design and not a creative person.

Looking past the students who don't consider the apparel industry as a potential career path, students who answered yes provided constructive reasons why. Many students enjoy the idea of apparel due to its constantly changing nature; others believe it is a growing market; some like the idea of a creative outlet as a career; and one student talked about the integration of technology with apparel.

Because there is a clear disconnect between the perceived experience in the sector (primarily just retail (as noted in the focus groups with students) and the variety of career options that actually exist in the industry, it is difficult to know what students' perceptions are of the actual career opportunities that exist in the apparel sector: design, business management, data mining and trends forecasting, production supervisors, and others. Increasing awareness of the variety of careers in the apparel sector needs to be a key step taken in order to more effectively recruit young people to the industry.

7.4 Influencers

It also became important to understand what sources help influence career decisions. When looking for career information students consult their parents the second most, only slightly behind the internet. 68% of students use their parents as a source, whereas 70% use the Internet. It is undeniable the influence that parents have on grade school children. But when asked what they wanted to do when they grow up, 81% of students stated that they wanted a job completely different from their parents.

A further step looked specifically into how many parents of the sample are in the apparel, and if so, are their children proud of them for it. Of all of the students surveyed, a total of 15% stated that their parents work in the industry, with only two out of 52 responses resulting in the student not being proud of the work they do. Based on the sample provided, despite the low interest of following their parents' footsteps, the fact that some students' parents are in the apparel industry doesn't deter them from being proud of work they do.

As a result of the findings, it is noted that because students value the opinions of their parents so highly, that the audience for a campaign to attract employees to the sector should be smartly targeted at parents equally. If parents can understand the industry and

what it really means to be a member of a company in the sector, perhaps it would become a stronger option, or even a suggestion for students to consider a career in the sector. To take the suggestion a step further, if people in the apparel sector could be featured and/or profiled, there may be better education around the lifestyle of the job and how people can go about living their lives as a result of working in the sector.

7.5 Apparel Employee Satisfaction

A second survey, sought to analyze the current satisfaction levels of professionals in the apparel industry to determine what strengths exist in the culture that could be promote d to attract youth to the industry.

Professionals answered 109 questions and statements regarding their satisfaction toward their employment experience. Representatives of a total of 18 companies in nine sectors of the industry completed the survey. There were a wide array of different positions held, but a larger portion of the surveyed population were: executives, product designers, and sewers.

Considering the sector as a whole though, clear conclusions were made and highest points of satisfaction are:

- I like the product my company produces
- My work is essential to the financial sustainability and growth of the company
- I am good at my job
- I would recommend this company to friends as a great place to work
- My work here matters

There is an obvious sense of self-importance in the workplace throughout the apparel industry, and is a positive reflection of pride in the work that is done. When it is indicated that employees have a high sense of mastery in the work they do, and that they feel they are integral to the success of the company, there is typically a high sense of confidence and engagement at work as well. When people can come together and feel they do good work, there is very little that is articulated on the job description that describes this.

Although there are good representations for the statements with highest rate of satisfaction, there are also areas for improvement in the industry.

Lowest satisfaction:

- My current employee benefits plan meets my needs
- I value monetary rewards over all other incentives
- My salary accurately reflects the work that I do
- I have sufficient opportunities to work remotely
- There are effective training programs in place for new hires here

In the statements that scored lowest, it is clear that although money may not be the main driver, there is still a significant disconnect between what people are paid and what they feel like they deserve. To mitigate this, showing other forms of appreciation is important in keeping morale high, especially when considering that people want to be compensated other ways anyways.

Training programs are very important, and having it near the bottom of satisfaction could very well have an effect on retaining employees. It was further indicated by employees that they perceived new employees were not put through sufficient enough orientation training so they could quickly participate in the company.

There were multiple people in management that said job roles are not clearly defined, making it difficult to train their employees. It is imperative that employees have a clear idea of what they need to accomplish. If the employee is uncertain of their role, their work will be significantly less efficient.

When asked what gaps were apparent in training, one reply was much more abundant than the others: business skill training. Many of the professionals came into the industry and underestimated the business skills needed to excel in their roles and careers. It is important that post-secondary recognize this in future curricula development.

Worth noting is that some of the statements that scored low aren't a negative when it comes to working to closing the talent gap in the sector. Being authentic and transparent around the job and what the experience entails is key when attracting talent. Many students aren't going to want to work remotely, and many don't value monetary rewards as their highest priority. Understanding and using this data when articulating the experience is useful not just for attracting people, but to attract the *right* people who want the experience provided.

7.6 Summary

Based on youth's values, expectations, and reported desirable attributes in their "dream job" – as well as their limited awareness about what the apparel industry can offer in terms of careers – it is advisable that future attempts to promote the industry as a viable avenue for employment to youth emphasize the creative career options within apparel, as well as the jobs' ability to offer professional growth and learning opportunities and flexibility.

However, it should be noted that selling a career in apparel in this manner does not necessarily address the major and immediate employment needs in the sector – technical trades: sewers, cutters, and other production workers. This need is further discussed in **Section 4.** These production-level jobs cannot always be reasonably marketed as emphasizing creativity, teamwork, or flexibility in the work. While employers noted that these jobs do require an image overhaul to make them appealing and reduce the stigma associated with garment factory work, it is not realistic to expect to be able to sell these

jobs to youth using the same values and expectations that they reported in the survey. In fact, many employers believe immigration of skilled trades from other countries is the only viable short-term option to fill the great number of immediate jobs at this level.

Employers were also encouraged to create solid career paths over the medium to long-term. In both the survey and key informant interviews, employers suggested that creating an apprenticeship-like structure for sewers and other production-level workers would be helpful in revamping the job's image. It would also acknowledge that sewing is a skilled job that requires significant hands-on experience, as well as familiarity and comfort with industrial machinery, to do the job well.

The implementation of incremental advancement at stages of experience providing a career path would satisfy the need for upward mobility. While a job marketed in this way may not play well with youth who are seeking creative outlets and opportunities for flexible work environments, it may find some resonance among students considering trade-type occupations for their future careers.

One key informant, during interviews, suggested that manufacturers in the industry could work together to create a graduated on-the-job training program. This interviewee suggested that work at linens companies would be a good entry point for people new to industrial sewing, as the seams and work is very simple and would allow them to get comfortable with the machines. From there, as employees gain experience and proficiency at the work, they could move on to more complex sewing tasks. It should be noted, however, that such a plan would result in a regular movement of sewers out of the "simpler" manufacturers and into more complex manufacturing companies. It may be difficult to get buy-in from the simpler manufacturers, due to the fact that they would then see regular employee turnover just as their employees became very efficient at their jobs.

There is an opportunity for industry to work together to create a standard, graduated set of skills for sewers that can be learned through courses and/or hands-on experience, much like an apprenticeship.

8

RECOMMENDATIONS

SECTION 8: RECOMMENDATIONS

Based on a review of the labour market information, as well as insights from key stakeholders, several recommendations have been presented to help meet both current and future workforce needs.

No single solution will generate the required workforce numbers to have a significant positive impact on increasing an available skilled workforce. Industry will need to work collaboratively with government and post-secondary institutions to address skilled labour challenges across a range of fronts. No one solution will have the impact that industry requires to be successful and a comprehensive multi-faceted approach will be required. These recommendations are detailed below.

Develop a multipronged labour strategy to fill critical job vacancies and build a sustainable labour force

- First, this will include developing a sustainable local workforce to ensure that sufficient labourers in the core and foundational trades and professional streams are available to fill vacant positions. This will also include simplifying pathways to attract leadership talent so that companies can continue their expansion growth.
- Second, employers will need to engage in a more coordinated fashion with post-secondary to ensure that curricula and training regimes are regularly updated to meet current and future industry demands. This means improving communication flow so that existing resources are deployed appropriately and investments in new resources are targeted and meaningful.
- Third, Immigration needs to be viewed as a tool to be used by employers. The province is facing upwards of 1 million job openings by 2025 across all industries. A global economy means that labour will need to flow more freely so that companies do not lose their competitive edge and are able to remain in British Columbia and contribute to our prosperity.
- Fourth, industry needs to find ways to engage under-represented groups so they consider careers in the apparel workforce. Stereotypes needs to be challenged and a more accurate depiction of apparel related careers needs to be shared with students, parents and other influencers.
- Fifth, industry needs to coordinate itself so there is a central single point of service to lead initiatives and coordinate efforts. This will ensure that the collaboration to date continues its momentum and can be built upon to mutual success.

1. Development of a sustainable local workforce

- Employers need core and foundational trades and professional streams to exist in sufficient numbers.

- The large number of current and expected vacancies demands that more focused training programs be implemented. This is especially critical for jobs like sewers and cutters. The industry cannot function if these foundational skills are absent from the workforce in great number. More frequent and more rapid training needs to occur in order to produce a qualified and certified group of skilled workers.
- Attrition and the loss of employees through leaving the industry is another area of concern in BC, especially workers in occupations that are easily transferable between industries like e-commerce professionals. Additionally, key production occupations like sewers leave the industry early, taking with them the years of experience they have obtained. It is further estimated that approximately one-half (50%) of such workers leave the industry all-together. There are several factors that attribute to this movement including little incentive for older more experienced workers to stay, no perception of career/growth potential, cost of living in major urban centers, and perception of the industry by younger employees.
- In order to alleviate some of these issues some fundamental changes may need to be considered. Industry certification and an improved career path/potential for advancement may be crucial to retaining employees by adding value to the skill level they have obtained and providing tangible, incremental goals over the span of a career. Also, marketing the industry as a career as opposed to a job to younger employees can provide another avenue of long-term sustainability through the perception of sustainability. These may also be strategies that can make the industry more attractive to those in similar occupations in other industries, in an attempt to reverse the flow of attrition.
- It may be beneficial to promote the fact that the industry hires predominantly full time employees while many other similar industries are transitioning to part time employees in order to circumvent benefits to full-time workers. Additionally, decentralizing and clustering manufacturing employment outside of expensive urban areas may ease the cost of living for current and prospective employees.
- Older workers and retirees need to be engaged so that knowledge transfer occurs and expertise is not lost from one generation to the next.

2. Industry and post-secondary need to communicate more effectively and collaborate more closely

- Growing the domestic skilled labour pool is also imperative to the sustained growth of the industry in BC. This is a longer-term exercise, likely to take five to ten years, that won't resolve critical and immediate labour shortages. However, it does establish systems for the future.
- Currently there is a perceived disconnect between the skills needed to be successful at the operative employee level in an apparel company and what is offered through local education. While curriculum and training programs in the province are present and utilized, a coordinated, consistent and specific consultation between industry stakeholders and academia is required to produce a

qualified, appropriate and sustainable domestic workforce. This will involve continual discussion as to the level of actual skill and technique expected of graduates as well as discussion as to the number of graduates required to satisfy industry demand.

- Analysis of the current BC fashion programs outlined in this report will need to be undertaken to determine if the needs of the industry are being met and if there is the ability to expand the programs to accommodate a greater number of graduates. There may be potential to reduce some overlap and encourage specialization.
- There is the potential to partner with globally leading institutions to provide satellite programs or campuses in BC if the coordinated need is made apparent. Some world-class programs and institutions have been identified in this report, and should be approached with the goal of establishing programs in BC.
- An area that was found to be lacking in current domestically provided education was in-field training (internships/co-ops) as part of current programs. This hands-on aspect has worked successfully in many similar industries and can provide the needed "real world" experience to graduates that makes them viable and productive members of the workforce more quickly. The exploration and pursuit of industry and academic partnerships with respect to in-field training should be undertaken by stakeholders on a more frequent basis and could be coordinated through an apparel industry association as a single point of service.
- Other areas of post-secondary, beyond training, need to form partnerships with the businesses in the cluster to promote technology transfer, as well as collaboration on business areas such as IT, operations, marketing and engineering.

3. Immigration is a tool that should be used by employers, encouraged by governments and not feared by the public

- Immigration will always play a role in a global economy, where companies are either multi-national players or exporters. Competing globally means having access to global talent. In addition if local residents do not wish to participate in certain career paths, employers are left with little option but to attract skilled labour from other provinces or from overseas if they wish to still perform work locally and remain in BC. Sometimes specialized skills are only available in very limited supply, meaning the few people trained to an advanced level may not reside in Canada.
- Immigration and foreign workers may be the most effective way to augment the workforce shortage that is currently limiting the growth and potential of the industry. Currently only a small proportion of apparel industry workers in BC are foreign (approximately 6%) while the current vacancy rate is over 15% and as high as 27% in certain key occupations. Foreign workers and immigration are greatly underutilized sources of skilled labour due to the difficult process (and low success rate) involved in hiring (as indicated in the report and as imparted as a substantial and immediate challenge by survey respondents).

- A coordinated effort from key stakeholders and business owners in BC is required to petition government to coordinate a program to "fast track" permanent residency of skilled labour especially for occupations that suffer from the greatest shortage, and least domestic interest (e.g. sewers). Only a small but concentrated increase in foreign workers in specific occupations would facilitate growth that could subsequently create jobs in many other sectors of the industry (including retail) that may have more appeal to the domestic workforce and a greater local job pool.
- Some possible steps that companies can take to facilitate the foreign worker process include:
    - If employers are made aware of the requirements from the beginning of the application process then they can apply them in the initial recruitment and selection phase to increase the likelihood of success.
    - Because the process is currently restrictive, time consuming, and costly, it may be beneficial to have a dedicated Service Canada Officer (Officer) assigned to work with and advise employers in the industry during the process, the LMIA (Labour Market Impact Assessment) applications may be more successful.
    - Jurisdiction of Officers assigned to cases should be within the local region as it may be a challenge for an employer in BC to work with the office where it resides currently in the Atlantic region of New Brunswick.
    - Local MLAs may be helpful in advocating for the rights of the worker. There are political implications i.e., if an employer were able to register and supply the required information once, they may be able to maintain compliance over time where multiple hires would be required consistently.
    - The NOC should not be the only description that is admitted for the criteria of certain occupations specific to the apparel industry as it is often too broad or vague to achieve qualified hiring decisions.

4. Youth engagement is a key step in changing how the industry is perceived

- Industry needs to find ways to engage under-represented groups so they consider careers in the apparel workforce. Stereotypes needs to be challenged and a more accurate depiction of apparel related careers needs to be shared with students, parents and other influencers.
- Industry can take the lead and find ways through digital and social media to market opportunities within their companies highlighting the experience and intrinsic rewards that motivate youth.
- This challenge is not unique to apparel and there may be potential to collaborate with other industries and support initiatives being run by industry groups, ministries and agencies of government.

5. Industry needs to formally come together

- The Labour Market Partnership has created new collaboration between industry players, plus with government and post-secondary. The BC apparel industry now needs to formally organize itself so there is a central single point of service to lead initiatives and continue to coordinate efforts.
- Joint training, hiring and immigration initiatives could be coordinated by an apparel industry body to the mutual benefit of all firms in the BC apparel cluster

APPENDIX A

Secondary and Post-Secondary Institutions and Training Programs Profile

Table 8.25: Secondary and Post-Secondary Institutions and Training Programs Profile

Educational Institution	Current Curricula	Type of Education	Duration	Ownership	Program Funding	Number of Entrants per year	Total Number of people in program as at summer 2016	Graduates per year	Coop & Internships	Company Partnerships	Job Placement Rates	Special Features of Program
Kwantlen Polytechnic University	Fashion and Technology	Bachelors'	4 years	Public	Partially funded by Ministry of Advanced Education	Information not available	Information not available	Information not available	Industry practicum in coursework – 240 hours	Arc'teryx, Lululemon, MEC, Mustang Survival, Sugoi, Bootlegger, Aritzia, Kit & Ace, Allison Wonderland, Bishop, Bootlegger, Chloe Angus Design, Helly Hansen, International Fashions (Kersh & Press), ivivva (Lululemon), Jessica Bayntun, Joanna Delaney Designs, Karma Athletics Ltd., Kensie, Manuel Mendoza, Noctex, Oak and Fort, Orb-Play On Trading Inc., Peekaboo Beans, Plenty, Plum, Pure Magnolia, Taylor Hart Design, Truvelle, FAST	>90%	One of two-degree programs in Fashion in Canada. Polytechnic nature of university embodies theory, hands on, and experiential learning. Includes coursework on advanced design, pattern-making (Gerber and Optitex), and production courses from first through fourth year, market analysis, global business strategies, mass manufacturing, research strategies, industry-led projects. Capstone project that incorporates full range of target market research, business planning, design, sourcing, and production. Industry driven projects – briefs to critiques. Students ladder into Teacher Education or Masters programming in apparel related programs (international articulation agreements) and MBAs.
Kwantlen Polytechnic University	Technical Apparel Design	Post-Baccalaureate Diploma	1 year			Information not available	Information not available	Information not available	Mentorships with industry partners		>95%	Advanced studies in creative innovation, technical textiles, advances in apparel production, human factors, strategic design direction, and global business strategies. Capstone incorporates original research, design, and user testing. Ladder into Masters programming.
Kwantlen Polytechnic University	Product Design	Bachelors'	4 years			Information not available	Information not available	Information not available	Industry work experience in coursework		Firsts graduates 2016 - #s not available	Emphasis on human factors, design thinking, and the design of recreational gear, sportswear, protective, safety and rescue equipment, areas of study include coursework similar to Fashion & Technology (above) with product design emphasis. Course projects derived from industry driven problems – student-led research & development activity in coursework (expanding funding for individuals to pursue R&D projects out of class as well). Cross-disciplinary learning with faculty from Science and Business. Ladder into Masters programming.

Educational Institution	Current Curricula	Type of Education	Duration	Ownership	Program Funding	Number of Entrants per year	Total Number of people in program as at summer 2016	Graduates per year	Coop & Internships	Company Partnerships	Job Placement Rates	Special Features of Program
Kwantlen Polytechnic University	Fashion Marketing	Diploma	2 years			30	Information not available	Information not available	Industry work experience required		>90%	Course work in the fashion industry as well as Marketing through the School of Business. Ladders into Bachelor of Business Administration programs.
Vancouver Community College	Non-Credited Courses	None		Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	
Vancouver Community College	Fashion Design & Production	Diploma	2 years			Information not available	Information not available	Information not available	Work experience required		Information not available	
Vancouver Community College	Merchandising	Certificate	1 year			Information not available	Information not available	Information not available	No formal internships		Information not available	
University of the Fraser Valley	Fashion Design	Diploma	2 years	Public	Partially funded by the Ministry of Advanced Education	20	0	16	One-week placements (40 hours) as a program requirement	Arc'teryx & SUGOI Performance Apparel	Information not available	Currently under review due to low enrolment rates
Art Institute of Vancouver	Fashion Design	Diploma	18 months	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships, work experience elective offered		Information not available	
Art Institute of Vancouver	Fashion Marketing	Diploma	18 months			Information not available	Information not available	Information not available	No formal internships, work experience elective offered		Information not available	
Blanche MacDonald Centre	Fashion Design Program	Diploma	1 year	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	
LaSalle College Vancouver	Fashion Design Program	Diploma	75 weeks	Private	100% Tuition	14			No formal internships			Fashion Marketing offered online
Vancouver College of	Fashion Design	Diploma	1.5 years	Private	100% Tuition	Information not	Information not	Information not	No formal internships		Information not	

Educational Institution	Current Curricula	Type of Education	Duration	Ownership	Program Funding	Number of Entrants per year	Total Number of people in program as at summer 2016	Graduates per year	Coop & Internships	Company Partnerships	Job Placement Rates	Special Features of Program
Art and Design	Program					available	available	available			available	
Vancouver College of Art and Design	Marketing and Merchandising for Fashion	Diploma	1.5 years			Information not available	Information not available	Information not available	No formal internships		Information not available	
Vancouver School Board - Eric Hamber Secondary School	Fashion Design and Technology	Grade 11/12	2 years	Public	100% Government, supply costs paid by student	Information not available	Information not available	Information not available	4-5 months work experience required		Information not available	Courses for high school students
Langara College	Image & Style Consulting	Certificate	114 Hours	Public	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	Part time, no application required, work at own pace
Langara College	Professional Development Series	Courses	Varies			Information not available	Information not available	Information not available	No formal internships		Information not available	
Langara College	Sewing and Fashion Arts	Certificate	155 hours			Information not available	Information not available	Information not available	No formal internships		Information not available	
MC College	Fashion	None				Information not available	Information not available	Information not available	4 week internship	Gentle Fawn, Ilie Saab, Zac Posen, Aritzia, DACE	Information not available	
Centre for Arts and Technology - Kelowna	Fashion Design and Merchandising	Diploma	1 year	Private	100% Tuition	Information not available	Information not available	Information not available			83%	
Pacific Design Academy	Fashion Industry	Diploma	2 Years	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	
John Casablancas Institute	Core Fashion Design	Diploma	6 months	Private	100% Tuition	10	7	Unknown – new program	48 hours		Unknown – new program	

Educational Institution	Current Curricula	Type of Education	Duration	Ownership	Program Funding	Number of Entrants per year	Total Number of people in program as at summer 2016	Graduates per year	Coop & Internships	Company Partnerships	Job Placement Rates	Special Features of Program
Emily Carr - University of Art and Design	Industrial Design	Bachelor's	4 years	Public	Partially funded by Ministry of Advanced Education	Information not available	Information not available	Information not available			78%	Offers design for electronic wearables
			Large institutions do not offer programs specifically designed to train students on industrial sewing machines. However, smaller non-accredited organizations in BC provide courses in professional sewing (Vancouver Sewing Classes, La Movida sewing and design studios).								

Educational Institution	Current Curricula	Type of Education	Duration	Ownership	Program Funding	Number of Entrants per year	Total Number of people in program as at summer 2016	Graduates per year	Coop & Internships	Company Partnerships	Job Placement Rates	Special Features of Program
Kwantlen Polytechnic University	Fashion and Technology	Bachelors'	4 years	Public	Partially funded by Ministry of Advanced Education	Information not available	Information not available	Information not available	Work experience required	Arc'teryx, Lululemon, Mountain Equipment Co-op, Mustang Survival, Global Collective and SUGOI	Information not available	technology-focused and engages in collaborative projects
Kwantlen Polytechnic University	Technical Apparel Design	Post-Baccalaureate Diploma	1 year			Information not available	Information not available	Information not available	No formal internships		Information not available	advanced studies in technical textiles, production, and global business strategies
Kwantlen Polytechnic University	Product Design	Bachelors'	4 years			Information not available	Information not available	Information not available	Work experience required		Information not available	emphasis on the design of recreational gear , sportswear, protective, safety and rescue equipment
Kwantlen Polytechnic University	Fashion Marketing	Diploma	2 years			30	Information not available	Information not available	Work experience required		Information not available	

Educational Institution	Current Curricula	Type of Education	Duration	Ownership	Program Funding	Number of Entrants per year	Total Number of people in program as at summer 2016	Graduates per year	Coop & Internships	Company Partnerships	Job Placement Rates	Special Features of Program	
Vancouver Community College	Non-Credited Courses		None		Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	
Vancouver Community College	Fashion Design & Production		Diploma	2 years			Information not available	Information not available	Information not available	Work experience required		Information not available	
Vancouver Community College	Merchandising		Certificate	1 year			Information not available	Information not available	Information not available	No formal internships		Information not available	
University of the Fraser Valley	Fashion Design		Diploma	2 years	Public	Partially funded by the Ministry of Advanced Education	20	0	16	One-week placements (40 hours) as a program requirement	Arc'teryx & SUGOI Performance Apparel	Information not available	Currently under review due to low enrolment rates
Art Institute of Vancouver	Fashion Design		Diploma	18 months	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships, work experience elective offered		Information not available	
Art Institute of Vancouver	Fashion Marketing		Diploma	18 months	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships, work experience elective offered		Information not available	
Blanche MacDonald Centre	Fashion Design Program		Diploma	1 year	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	
LaSalle College Vancouver	Fashion Design Program		Diploma	75 weeks	Private	100% Tuition	14			No formal internships			Fashion Marketing offered online
Vancouver College of Art and Design	Fashion Design Program		Diploma	1.5 years	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	
Vancouver College of Art and Design	Marketing and Merchandising for Fashion		Diploma	1.5 years			Information not available	Information not available	Information not available	No formal internships		Information not available	

Educational Institution	Current Curricula	Type of Education	Duration	Ownership	Program Funding	Number of Entrants per year	Total Number of people in program as at summer 2016	Graduates per year	Coop & Internships	Company Partnerships	Job Placement Rates	Special Features of Program	
Vancouver School Board - Eric Hamber Secondary School	Fashion Design and Technology		Grade 11/12	2 years	Public	100% Government, supply costs paid by student	Information not available	Information not available	Information not available	4-5 months work experience required		Information not available	Courses for high school students
Langara College	Image & Style Consulting		Certificate	114 Hours	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	
Langara College	Professional Development Series						Information not available	Information not available	Information not available	No formal internships		Information not available	
Langara College	Sewing and Fashion Arts		Certificate	155 hours			Information not available	Information not available	Information not available	No formal internships		Information not available	
MC College, Kelowna Campus	Fashion		None				Information not available	Information not available	Information not available	4 week internship	Gentle Fawn, Ilie Saab, Zac Posen, Aritzia, DACE	Information not available	
Centre for Arts and Technology - Kelowna	Fashion Design and Merchandising		Diploma	1 year	Private	100% Tuition	Information not available	Information not available	Information not available			83%	
Pacific Design Academy	Fashion Industry		Diploma	2 Years	Private	100% Tuition	Information not available	Information not available	Information not available	No formal internships		Information not available	
John Casablancas Institute	Core Fashion Design		Diploma	6 months	Private	100% Tuition	10	7	Unknown – new program	48 hours		Unknown – new program	
Emily Carr - University of Art and Design	Industrial Design		Bachelor's	4 years	Public	Partially funded by Ministry of Advanced Education	Information not available	Information not available	Information not available			78%	Offers design for electronic wearables
			Large institutions do not offer programs specifically designed to train students on industrial sewing machines. However, smaller non-accredited organizations in BC provide courses in professional sewing (Vancouver Sewing Classes, La Movida sewing and design studios).										

Source: Key informant interviews and various institution websites

Table 8.26: Other Successful Programs (Canada and Globally)

Program Name	Location	Best Practices for Implementation	Enrolment	Acceptance Requirements	Tuition per Year	Type of Education	Curriculum	Job Placement Rates
Successful Programs in Canada								
Ryerson University - Fashion Design (and Fashion Communication)	Toronto, Canada	Fashion Zone Incubator - the goal is to promote entrepreneurship as a viable career path for prospective entrepreneurs interested in fashion. There is an emphasis on interdisciplinary collaboration in order to increase the development of unique new technologies, products, services, processes and accelerate the likelihood of successful new companies and social ventures. Services of Incubator: scholarships and funding opportunities, assist in research, development and commercialization of fashion products and services, support the growth of start-ups through Ryerson University network.	Number of Undergraduates: 644	Admission requirements: 3 portfolio pieces, short essay, resume, 78+ academic average.	Domestic Students: $6,990 - $7,592, International Students: $22,145 - $22,965	4 year Bachelor's	Specialization begins in second year. Within the third and fourth year there are core courses in intermediate and advanced apparel design, computer aided design, tailoring, production management, fashion and society, international marketing, grading and materials management. Students may further focus on such subjects as contour and knitwear design, theatre/historical costume, surface (textile) design, and curation and exhibition. Students are required to complete 400 hours of documentable work experience between first and fourth year.	2012 6-month employment rate of Ryerson Fine and Applied Arts Students: 86.2%
George Brown College - Fashion Design (and Fashion Management, Jewelry, Fashion Business Industry)	Toronto, Canada	Strong partnership with industry. The college prioritize business competencies, international field work and technical training.	Full time diploma enrolment for entire college: 9398	High School level math and English required and sewing test.	$4,000	2 year Diploma	Fashion Management program requires 280 hours of field work	2013 Ontario student loan recipients - Fashion Design: 73%, Fashion Management: 83%, Fashion Business Industry: 91%

Program Name	Location	Best Practices for Implementation	Enrolment	Acceptance Requirements	Tuition per Year	Type of Education	Curriculum	Job Placement Rates
Olds College - Apparel Technology: Fashion Apparel	Calgary, Canada	Technology focused, lessons integrated with iPad use.	Full time enrolment in entire college: 1294	High School Math and English	~$$4,400	2 year Diploma	Program requires 40 hours field work.	2014: College claims 96% employment rate for all students
Lasalle College - Fashion Design, or Men's Fashion Design	Montreal, Canada	Recognized school, highly globalized, student work featured in galas, works with industry, programs offered in French and English		High school math, physical science, history, language	~$14,000	3 year Diploma	Work study approach, optional - 6 month of professional experience	College claims 90% employment rate for all students
Cégep Marie-Victorin - Fashion Design	Montreal, Canada	Option of women's and men's design, unique focus: fur designs.	2016: students admitted to program: 158	High school math, physical science, history, language		4 year Diploma	Option of international internships (Denmark and Paris).	76% employment rate
Successful Programs Internationally								
Central Saint Martins	London, England	Focus on global production, the program offers many opportunities to study abroad. Mentoring available to students. Own-it - program for advice on intellectual property. Artquest - program for students to engage in career opportunities, networking and employability advice. Arts Temp - an in-house temp agency program for recruitment of recent grads for on-campus employment. Partnerships with: H&M, Diadora, Pringle, Umbria Cashmere, Philips, Derry - City of Culture 2013, Dr Martens, Dyloan, Bally, Italian Trade	Full time fashion students: 746	Highly competitive, 6% acceptance rate. Requires portfolio, interview, and completion of: Foundation Studies in Art and Design, GCE A level, GCSE level or equivalent in 3 subjects (grade C or above).	Domestic Students: £9,000 International Students: £15,950	3-4 year Bachelor's, Master's programs	Consider one of the top fashion education institutions in the world. Offers specialty courses including: women's wear, men's wear, and sportswear.	94% of graduates are working or pursuing further studies.

Program Name	Location	Best Practices for Implementation	Enrolment	Acceptance Requirements	Tuition per Year	Type of Education	Curriculum	Job Placement Rates
		Commission, British Horseracing Authority.						
The New School - Parson's Fashion Design	New York, New York	Highly connected with the industry, senior year thesis project required for 4-year degree, offers studying abroad and a student gallery.	Total freshmen enrolment: 784	Requires piece of art with essay, portfolio with 8-12 pieces, 500 word personal essay, possible letter of recommendation.	$45,080 USD	Certificate, 2 year Associates, 4 year Bachelor's	Includes courses such as marketing, branding, merchandising math, Photoshop and senior year thesis.	New School graduate employment status: 83%
Fashion Institute of Technology	New York, New York	Focus on sustainable fashion, has student museum. The Style Shop - a student-run boutique program for real-world experience, where students handle entire process of the business, including: buying and planning, merchandising, product development, and sales and marketing.	Full time enrollment for Fall 2014 bachelors: 3517, Full time enrollment for Fall 2014 associates: 4741	Requires long essay and academic history, school transcript, portfolio.	Associates for domestic students: $5,000 USD Bachelors for domestic students: $7,000 USD	2 year Associates, 4 year Bachelor's	Includes courses such as child's wear, intimate apparel, knitwear, special occasion, and sportswear.	2015: graduates with associate's degree pursued higher education: 82%, 58% were employed. Employed baccalaureate graduates: 92% (73% related to degree)

Source: Key informant interviews and various institution websites

APPENDIX B
Detailed Methodology

APPENDIX B. DETAILED METHODOLOGY

Malatest designed a multi-method approach to collect the needed labour market information (LMI) on the BC apparel sector. These methods included reviewing and assessing the existing apparel labour market information, a literature and environmental scan, an employer survey, and key informant interviews with industry stakeholders including apparel sector employers and educational institutions.

B.2 Industry Profile

The industry profile contains a description of companies within the industry by the following categories:

- By sub sector (design, manufacturing, retail)
- By product category
- By location of products manufactured
- By general revenue

Labour force size and composition as well as employee demographics are described in **Section 4** of this report.

B.3 Key Occupational Groups

Even though the industry is challenged by skills and labour gaps across all categories, the BC Apparel LMP Steering Committee defined nine occupations of significant interest for this study. These occupations were identified as the most critical to fill to ensure ongoing competitiveness of the apparel sector. Occupations were prioritized based on reported challenges within the industry to hire qualified workers for the selected positions. The occupations were not intended to represent the full range of occupations within the apparel industry, but represent those deemed critical to the sector. The following table outlines the occupation title, a description of the duties as well as the associated NOC Code and NOC Occupation Title.

Table B.1 Key Occupation Titles and NOC Codes of Interest

Select Occupational Definitions		
Position Title	**Description**	**NOC Code and Occupation Title**
1. Apparel Quality Professionals	Apparel quality professionals plan, organize, direct, control and evaluate the operations of a manufacturing establishment or of a production department within a manufacturing establishment, under the direction of a general manager or other senior manager.	0911 Manufacturing managers
2. E-commerce Professionals	Computer programmers write, modify, integrate and test computer code for microcomputer and mainframe software applications, data processing applications, operating systems-level software and communications software. Interactive media developers write, modify, integrate and test computer code for Internet applications, computer-based training software, computer games, film, video and other interactive media.	2174 Computer programmers and interactive media developers
3. Fit Specialist Engineers	Industrial engineering and manufacturing technologists and technicians provide technical support and services in the development of products, production methods, facilities and systems, and the planning, estimating, measuring and scheduling of work.	2233 Industrial engineering and manufacturing technologists and technicians
4. Merchandisers	Retail and wholesale buyers buy merchandise for resale by retail or wholesale establishments and are usually responsible for the merchandising operations of retail or wholesale establishments.	6222 Retail and wholesale buyers
5. Pattern Makers	Pattern makers operate machines to producing patterns for apparel products.	9442 Weavers, knitters and other fabric making occupations
6. Product Designers	Designers conceptualize and produce designs for textiles and apparel.	5243 Theatre, fashion, exhibit and other creative designers
7. Sewers	Sewers operate sewing machines to sew fabric, fur, leather or synthetic materials to produce or repair garments and other articles.	9446 Industrial sewing machine operators
8. Supply Chain/Logistics	Supervisors supervise and co-ordinate the activities of workers; plan, organize and oversee operational logistics of the organization; and requisition supplies and materials.	1215 Supervisors Supply Chain
9. Textile Sourcers	Textile sourcers inspect and grade textile, fabric, fur and leather products to use in apparel production.	9447 Inspectors and graders, textile, fabric, fur and leather products manufacturing

Source: HRSDC 2011 National Occupation Classification website. Retrieved August 8, 2016, from http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/Welcome.aspx

B.4 Employer Survey

B.4.1. Development of Data Collection Instruments

Malatest, in consultation with the BCAFM and a small contingent of industry employers, developed a comprehensive survey instrument with questions designed to obtain detailed labour market information.

The Employer Survey was developed to be approximately 20 minutes in length, with the majority of questions being closed-ended with a few open-ended questions. In summary, the survey was designed to collect the following apparel industry labour market information:

- Current workforce numbers (both formal and informal employment, full-time and part-time);
- Vacancy rates (overall and for ten key occupations of interest);
- Estimated workforce numbers over the next five years (both formal and informal employment, both full-time and part-time, and by level of skill and education);
- Estimated number of new hires required to fill new demand and current vacancies, as well as replace retiring/exiting workers;
- Number of workers expected to retire over the next five years (both full-time and part-time, and by level of skill and education);
- Level of education expected of new employees;
- Level of skill expected of new employees;
- Job titles and job descriptions of anticipated new/needed employees (i.e. in order to do later NOC coding);
- Hiring difficulties in the last two years for various education levels, skill sets, and job titles;
- Number of vacancies unfilled for four months or longer; and
- Other critical workforce characteristics.

A draft of the survey instrument was submitted to the BCAFM on March 16, 2016. Malatest received feedback on the survey from the BCAFM and from the Apparel LMP Steering Committee on March 23, 2016. The edited final draft version was submitted to the BCAFM on March 24, 2016, and this was submitted to the Ministry of JTST for final approval on March 29, 2016. Final approval from the Ministry of Jobs, Tourism and Skills Training (JTST) was received on April 17, 2016.

The finalized Employer Survey instrument was programmed into Malatest's CallWeb system, Computer-Assisted Telephone/Web Interviewing (CATI/CAWI) software. The programmed survey instrument was subjected to rigorous internal testing to ensure the text, survey flow, and internal validity checks performed as intended.

B.5 Gen Y Inc. Research

Gen Y Inc, with input from industry and the BCAFM, designed an anonymous survey to determine which activities students enjoyed most, as well as how they liked to learn and be treated. The responses would be used to predict cultural fit for certain role types in the apparel industry.

In addition to Likert Scale questions, students were also asked open-ended questions that allowed them to expand upon their thoughts on what they enjoyed most, and what they knew about and how they perceived the apparel sector.

B.5.1 Student Survey and Focus Groups

Gen Y conducted a survey with high school students from high schools in six cities, four regions, throughout BC: Vancouver, Victoria, Burnaby, Fort St. John, Cranbrook and Smithers. All of the students except those from Vancouver and Burnaby completed the survey online; students from Vancouver and Burnaby completed the survey via paper handout. A total of 414 students, ranging from Grades 8 to 12, completed the survey. Students were recruited via their school principals; Gen Y representatives contacted the principals at selected secondary schools in these cities and asked them to circulate information about the survey among their students. While informative, the geographic specificity of the sampled students limits the survey's ability to be generalized to all BC students. Findings should be considered as high-level guidelines and indicators as to what the upcoming generation of the workforce is seeking in terms of values and experiences at work.

In addition to the student survey, eight focus groups were conducted with 64 students from Vancouver at Gladstone Secondary School. These focus groups focused specifically on employment and what students value most in a prospective job. The qualitative focus group format allowed for more in-depth discussion and examination of these topics.

B.5.2 Employee Survey

A second survey was also conducted by Gen Y with apparel industry professionals employed by local apparel manufacturers and design companies. This survey primarily asked respondents about their satisfaction level, based on job dimensions or attributes that Gen Y Inc. has found typically contribute to a healthy organizational culture. In total, 93 responses were received from employees in the apparel sector. Employees were recruited through a distribution of the survey to key contacts provided by the BC Alliance of Manufacturing. Although there an imbalance between student and industry responses [17], there was sufficient data to be able to make calculations and recommendations for the sector and companies within the apparel sector.

[17] Target number of survey completions was n=500, including both student and employee surveys, ideally with an even split between the two groups (i.e., 250 completions from each group). In total, 507 survey completions were obtained, but only 93 were from the industry group.

Individuals from a large variety of occupation roles completed the employee survey. Table B.2 provides a breakdown of the number of survey completions by occupation title.

Table B.2 Breakdown of Gen Y Employee Survey Respondents, by Occupation

Occupational Title	n
Apparel Quality Professional	4
E-commerce Professional	5
Executive	12
Fit Specialist Engineer	3
Merchandiser	3
Other	31
Pattern Maker	4
Product Designer	13
Sewer	10
Supply Chain / Logistics	8
Textile Sourcer	0
Total	**93**

Source: Apparel Industry Employee Survey 2016

B.6 Development of Sample List

With no complete source of contact information for the 436 apparel firms in the province, multiple sources were used to compile a sufficient sample of businesses for the industry. The BCAFM provided Malatest with a list of 238 apparel manufacturing employers in BC utilized in Phase 1 of the LMP. This list was compiled from different internal sources that contained contact information for the company including email and phone number. The list was further refined by Malatest researchers. Once businesses that were closed, in the process of closing, or that were incorrectly categorized and did not actually belong to the sector, were removed from the sample, Malatest was able to source approximately 170 valid contacts. Malatest used additional resources at their disposal to supplement the list as best as possible. Using infoCanada Business lists and ASDE Survey Sampler, and cross-referencing against the original list, Malatest was able to augment the sample. Due to the fact that no email contacts were available with the additional sources, Malatest had to telephone 600 businesses by cold-calling in order to determine if they were still in business, whether they fit within the sector, and if so whether they had any employees or were a single-person establishment. In total, Malatest made 2,758 calls to over 600 businesses to add 155 *valid* cases to the sample list for 325 in total.

B.7 Survey Administration

The Employer Survey primarily focused on collecting labour force data pertaining to current and future workforce projections for particular occupations considered to be in high demand for the apparel manufacturing industry. The Employer Survey also collected data relating to each company's current and future workforce, education and training needs, and recruitment and retention strategies. A field test was undertaken on April 27, 2016 to solicit feedback on the survey design and clarity of questions asked, as well as gather any suggestions for improvement from employers.

Eight employers from the list of apparel manufacturing employers in BC were highlighted by the BCAFM as candidates for the field test of the Employer Survey. Email invitations to complete the Employer Survey were sent to the eight employers highlighted by BCAFM on April 27, 2016. Follow-up calls with the eight employers to encourage participation were conducted by experienced surveyors on Thursday, April 28, 2016.

One survey completion was obtained by telephone with consolidated survey feedback subsequently received in an email from the respondent. The remaining seven sampled employers provided both the survey data and feedback online. Based on the initial feedback some minor alternations to the survey in the form of clarifying language were proposed and sent to BCAFM on April 29, 2016 for approval.

The Employer Survey was launched on May 12, 2016 with email invitations sent to human resources and/or management contacts at apparel manufacturing companies in BC The Employer Survey email invitations noted a subject line of 'Survey Notification to Apparel Companies in BC', and presented some information about the survey as well as a direct link and unique access code to access the online survey form. Experienced surveyors in the Consultant's survey house were trained on telephone administration of the Employer Survey to allow for both in-bound telephone survey completions and telephone follow ups with any employers that did not complete the survey in the desired timeframe.

The first reminder email was sent on May 19, 2016 to employers that had yet to complete the survey, noting the word 'Reminder' in the subject line of the email invitation. An additional reminder email was sent out on June 2, 2016. Follow up calls were completed starting the week of May 23, 2016 and were ongoing until July 20, 2016.

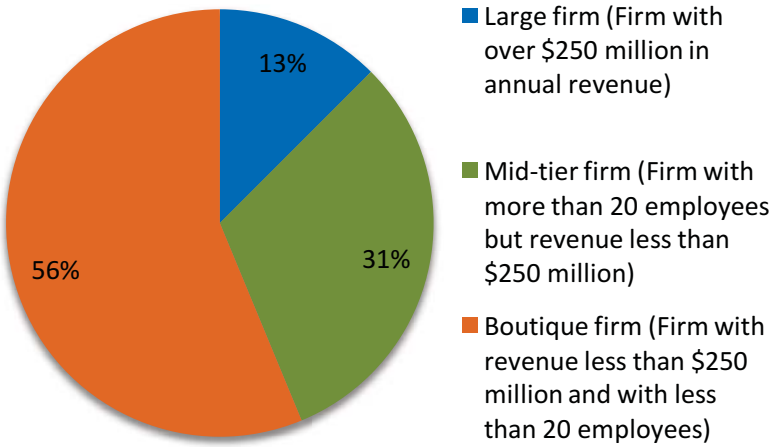
Initial follow up calls focused on confirming the correct contact at the company had received the email invitation, and re-sending the email invitation to an updated contact if necessary. During this first round of calls, a large number of cases were determined to not qualify to complete the survey (e.g. one to three employees primarily retail based and no manufacturing component of the business; business not part of apparel industry or sub sectors of the industry). A large number of cases were also determined to be out of business, and/or a phone number that was no longer in service.

Malatest staff employed directory searching techniques to source new telephone contact numbers for cases with phone numbers no longer in service.

Due to initial poor engagement from the sector the time the apparel employer survey stayed open was lengthened. It was determined that to obtain a reasonable response rate extensive communication between the BCAFM, Malatest and members of the cohort had to be undertaken, including high numbers of emails and phone calls. This effort, while time consuming, produced a greater than anticipated number of survey completions. Most of these completions came in the latter stages of survey administration once a sufficient number of contacts was made. In the extended time period Malatest completed 61 surveys from the 325 valid cases for a response rate of 19%. Malatest was also able to partially complete an additional 21 surveys that added vital labour market information to the sample increasing response to these questions to 25%. Partial survey completions would generally include all employee and occupation counts, the most essential data to the forecasting.

Survey Respondent Details As shown in Figure C.1 over half (56%) of the respondents to Malatest's employer survey were small-sized boutique firms, with fewer than 20 employees. Slightly less than a third are mid-tier firms, employing more than 20 employees but with under $250 million in annual revenue, and only 13% of the survey respondents are large firms.

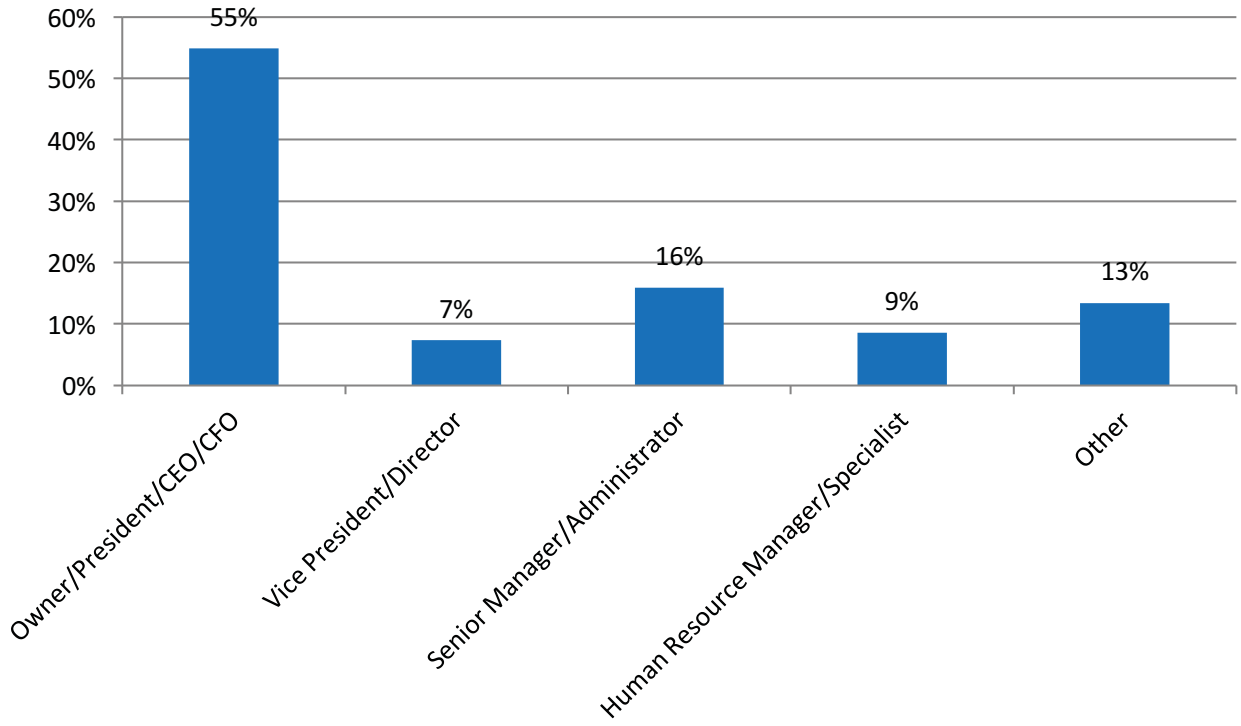
Figure B.1 Distribution of Responding Companies by Size



Source: Apparel Industry Employer Survey 2016, n=61

Figure B.2 shows the distribution of respondents by title. The majority of surveys were completed by high ranking individuals in the company in including 55% who indicated they were either the Owner/President/CEO or CFO.

Figure B.2 Distribution of Respondent Title



Source: Apparel Industry Employer Survey 2016, n=61

B.8 Survey Data Expansion

In order for the employer survey data to reflect the actual apparel manufacturing workforce in BC, a data expansion technique was utilized. The number of firms in the apparel manufacturing sector across British Columbia was determined using current Canadian Business Patterns[18] information by North American Industry Classification System (NAICS). The Canadian Business Patterns information also classifies each firm by size (Table 3.1:) by number of employees using ranges. These ranges provided an estimation of the distribution of firms by size category.

Size of business by number of employee categories were condensed into what seemed most appropriate for the type of analysis that was to be undertaken for the study. Size categories used in this report are as follows:

- **Category 1:** 1-19 employees
- **Category 2:** 20-99 employees

[18] Source: Canadian Business Patterns 2016

- **Category 3:** 100-499 employees
- **Category 4:** 500 plus employees

Once all survey data was collected the distribution of surveys by size category was determined, indicating how much representation by firm size across the province the data represented. The employee data was then expanded based on the ratio of survey completions in a specific size category to the actual number of firms in the province (e.g. companies with 500 plus employees were given an expansion factor of 1 because all firms in the size category responded to the survey).

Once employee data was expanded to represent the actual number of employees in BC the result was compared against the 2011 National Household Survey employee data by NAICS linearly expanded to 2016 using the growth rate of the monthly collected Survey of Employment, Payrolls and Hours (SEPH). Survey data expansion was determined to be in-line with the provincial workforce when compared to the secondary sources.

B.8.2 Caveats

It should be noted that using this data expansion approach it is assumed that the non-respondents within a given size category will have the same labour market characteristics with those respondents within the same category. This may or may not always be the case, particularly for category 1 where the greatest level of expansion occurred which may result in a higher level of variability in the data. This is far less a factor for categories 2 and 3 due to the fact that only a small expansion took place because of higher response. This is of no concern to category 4 as a census of these companies was taken.

B.9 Key Informant Interviews

B.9.1 Recruitment

Key informants were recruited for interviewing by Malatest staff, based on a list of interested stakeholders provided to Malatest by the BC Alliance for Manufacturing. Representatives from companies included presidents and CEOs, and/or human resources or hiring managers, as these individuals were assumed to be most informed about the company's hiring trends and challenges.

Interviewees were contacted by email, with telephone follow-up, and invited to participate in an interview with a researcher from Malatest. Interviewees were encouraged to complete the interview in person, between May 16 and May 20. If this was not possible, interviews were completed by phone at a mutually convenient time for both parties. All interviews were completed by May 31, 2016.

B.9.2 Interview Guides

All key informant interviews were guided by a semi-structured interview guide. Questions in these guides covered several areas of interest to this project, including key hiring needs, experiences with hiring local graduates and overseas talent, anticipated future hiring needs, and other relevant topics. The guides were reviewed and approved by the BC Alliance for Manufacturing prior to any interviews being conducted, and were provided to interviewees in advance of the interview so they would have a chance to review the questions beforehand.

Two guides were created: one for industry stakeholders, and one for representatives from educational institutions. These guides covered many of the same topics, but questions were slightly different to account for the different perspectives each stakeholder group would have on the apparel labour market in BC.

B.9.3 Interview Completions

In-person interviews were completed between May 15 and May 19, at the interviewee's place of business for their convenience. Interviews typically took about 45 minutes to complete, although some interviews did run longer when interviewees were able to provide more extensive answers to the questions. The interviewer took notes throughout the interview session to facilitate analysis and writing of the final report. With interviewees' permission, all interviews were audio recorded to supplement the interview notes and facilitate further analysis and writing.

Highlighted in Table B.3 is the breakdown of the number of interviews completed with representatives from each stakeholder group.

Table B.3 Key Informant Interviews Completed, by Stakeholder Group

Stakeholder Group	Number of Interviews Conducted
Industry Stakeholders	
Large Brand Technical Apparel and Fashion Firms	3
Specialized Industrial Garment Firms	2
Mid-Tier Apparel Firms (emerging brands)	2
Boutique Fashion and Apparel Firms	3
Third Party Manufacturers and Designers	2
Educational Stakeholders	
Public Institutions	3
Private Institutions	3
Total	***18***

B.10 Investigation of Relevant Educational Institutions and Programs, in BC and Elsewhere

In order to provide a better base of knowledge, and to better understand the ways in which the apparel subsector handles training and recruitment in other jurisdictions, Malatest identified and examined five successful apparel-related education and training programs in other jurisdictions. Responses to surveys were incomplete and most input resulted from a review of literature surrounding these programs in order to identify applicable best practices for implementation. A number of factors made it a challenge to gain acceptable responses meaning no accurate profiles of entrants, capacity or graduates was created. However, factors assessed included criteria such as enrolment, tuition, curriculum, and job placement rates.

B.11 Comparative Analysis of Best Practices Involving Government Interventions in Other Jurisdictions

Malatest was unable to complete a review of eight successful government and industry initiatives in other jurisdictions that address labour shortages and/or skills gaps in the manufacturing sector, with the intention of identifying possible best practices and solutions to be applied to BC's apparel manufacturing industry. Much of this was due to limited information found during the literature review and a poor response rate from the contacts in other jurisdictions. This work will need to be expanded upon in a future phase of the sector LMP.

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