Textiles, Clothing and Footwear Industry Reference Committee

Skills Forecast and Proposed Schedule of Work 2018-2022

MST Textiles, Clothing and Footwear Training Package

May 2018

IBSA MANUFACTURING

Administrative Information

Name of Industry Reference Committee (IRC):
Textiles, Clothing and Footwear (TCF)

Name of Skills Service Organisation (SSO):
Innovation and Business Skills Australia (IBSA Manufacturing)

About the Industry Reference Committee

The **Textiles, Clothing and Footwear Industry Reference Committee** comprises eleven members and was constituted in August 2017.

The 2018 Industry Skills Forecast and Proposed Schedule of Work was reviewed and approved by the membership below:

Mr Leon Drury (Chair)
Ms Meriel Chamberlin
Ms Kay Gerard
Mr David Giles-Kaye
Mr Paul Newbery
Ms Kerryn Wollington
Ms Alison Bradshaw
Ms Ana Drougas
Ms Millie Gilbert
Ms Hilde Heim
Ms Michele O'Neil

Industry Reference Committee Signoff

The 2018 **Textiles, Clothing and Footwear IRC** Skills Forecast and Proposed Schedule of Work was approved as the result of a properly constituted IRC decision.

IRC Chair: Leon Drury

Date: May 2018

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This IRC Skills Forecast and Proposed Schedule of Work has been prepared on behalf of the Textiles, Clothing and Footwear Industry Reference Committee for submission to the Australian Industry Skills Committee (AISC).

This document has been produced with the assistance of funding provided by the Commonwealth Government through the Department of Education and Training.

Contents

Executive Summary

The Industry Reference Committee (IRC) Skills Forecast and Proposed Schedule of Work identifies priorities for training package development work to meet the needs of industry. This document is based on research, analysis and consultations with IRC members and other stakeholders and provides evidence of current and emerging industry skills needs.

What is the Textiles, Clothing and Footwear Industry?

The Textiles, Clothing and Footwear (TCF) Industry is grouped into three broad areas:

- production of clothing, textiles, footwear, leather goods and technical textiles
- provision of services including dry cleaning operations, laundry operations and footwear repairs
- processing of natural (wool, cotton and leather) and synthetic materials such as polyvinyl chloride (PVC) and shade cloth.

The TCF Industry operates in all Australian states and territories, with enterprises in both city and regional areas and major hubs located in New South Wales and Victoria. The majority (nearly 60%) are non-employing businesses. TCF businesses with a turnover of less than $50,000 make up nearly 25% of the total TCF businesses and around 66% have a turnover of less than $200,000. Many businesses prefer to subcontract services so they can manage fluctuations in work and concentrate on their core business activity, but this can distort the picture of TCF workforce numbers and skill requirements.

Critical Workforce Challenges and Opportunities

The traditional TCF manufacturer has largely been replaced by sophisticated manufacturers offshoring all or some production work and local boutique manufacturers carving out a market in TCF products for niche and specialised market segments. New technologies and materials such as wearable textiles offer Australian enterprises the opportunity to compete in new spheres, and automation and technology underpinned by digitisation makes the tyranny of distance far less significant.

The large number of small TCF businesses, the proportion of business with no employees, and the amount of subcontracting in the industry reduces the ability for businesses to invest in training and developing new and existing staff. Manufacturing skills are required for large-run clothing production but Vocational Education and Training (VET) funding seems geared to more visible and attractive occupations such as fashion design.

Empowered customers are driving change in the TCF Industry as they increasingly seek unique experiences, improved customer relationships and serviceability through end-to-end service.

Forecasting Skills Priorities

The skills priorities have been informed by research, industry consultations, and surveys of employers, industry associations and Registered Training Organisations (RTOs), as well as one-on-one interviews.

Training Package Priorities

In response to current and emerging skills needs, the IRC has identified the following areas of work for training package development:

- laundry and dry cleaning
- clothing and textile production skill sets
- new technologies and materials
- fashion design for production settings
- Science, Technology, Engineering and Mathematics (STEM) skills.

The Proposed Schedule of Work 2018-19 to 2021-22 was developed by the IRC, with support from IBSA Manufacturing, based on identified industry trends. The Schedule lists the priorities over the next four years, and the rationale and proposed timeframes for these activities.

The item identified as critical for inclusion as a priority for the 2018-2019 schedule of work and a Case for Change included as part of this Skills Forecast is:

- Laundry and dry cleaning to provide flexible qualifications to better address growing markets, such as healthcare.

An item proposed for inclusion as a priority for the 2018-2019 Schedule of Work is:

- Clothing and textile production skill sets to provide specialised skill development in areas of demand and a means of recognising the skills of existing workers to improve retention.

Sector Overview

Industry Snapshot

The TCF Industry operates across urban and regional areas of Australia with major hubs located in New South Wales and Victoria.

The TCF Industry can be grouped into three broad areas:

- production of clothing, textiles, footwear, leather goods and specialised, technical textiles
- provision of services including dry cleaning and laundry operations, fashion design, and clothing and footwear repairs
- processing of natural (wool, cotton and leather) and synthetic materials such as PVC and shade cloth.

Traditional TCF manufacturers in Australia have been transitioning for some time, with successful Australian manufacturers generally off-shoring production of commodity goods or moving to the manufacture of specialised value-added goods that are differentiated by design or innovation.

Advanced applications for Australian TCF products include smart protective textiles for the military and emergency services, textile composites for aerospace and marine applications, medical textiles including tissue engineering scaffolds, filtration textiles for water and energy applications, fibrous materials such as components of mobile phones and batteries and large-scale applications in infrastructure, mining, agriculture, aquaculture and horticulture.[1] Traditional TCF manufacturing in Australia is being revolutionised by these advanced applications and manufacturers servicing bespoke markets.

The TCF Industry in Australia is coded within the Australian and New Zealand Standard Industrial Classification (ANZSIC) by the TCF Industry Reference Committee as follows.

1 ABS publication: 1292.0 - Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (Revision 2.0)

Table 1 – TCF Industry ANZSIC codes

Division	Subdivision	Group	ANZSIC Class
A – Agriculture, Forestry and Fishing	05 Agriculture, Forestry and Fishing Support Services	052 Agriculture and Fishing Support Services	0521 Cotton Ginning
C – Manufacturing	13 Textile, Leather, Clothing and Footwear Manufacturing	131 Textile Manufacturing	1311 Wool Scouring 1312 Natural Textile Manufacturing 1313 Synthetic Textile Manufacturing
C – Manufacturing	13 Textile, Leather, Clothing and Footwear Manufacturing	132 Leather Tanning, Fur Dressing and Leather Product Manufacturing	1320 Leather Tanning, Fur Dressing and Leather Product Manufacturing
C – Manufacturing	13 Textile, Leather, Clothing and Footwear Manufacturing	133 Textile Product Manufacturing[1]	1331 Textile Floor Covering Manufacturing 1332 Rope, Cordage and Twine Manufacturing 1333 Cut and Sewn Textile Product Manufacturing 1334 Textile Finishing and Other Textile Product Manufacturing
C – Manufacturing	13 Textile, Leather, Clothing and Footwear Manufacturing	134 Knitted Product Manufacturing	1340 Knitted Product Manufacturing
C – Manufacturing	13 Textile, Leather, Clothing and Footwear Manufacturing	135 Clothing and Footwear Manufacturing	1351 Clothing Manufacturing (which includes Millinery) 1352 Footwear Manufacturing
M – Professional, Scientific and Technical Services	69 Professional, Scientific and Technical Services (except Computer System Design and related services)	692 Architectural, Engineering and Technical Services	6924 Other Specialised Design Services (which includes Fashion and Textile Design)
S – Other Services	94 Repair and Maintenance	949 Other Repair and Maintenance	9491 Clothing and Footwear Repair
S – Other Services	95 Personal and Other Services	953 Other Personal Services	9531 Laundry and Dry Cleaning Services

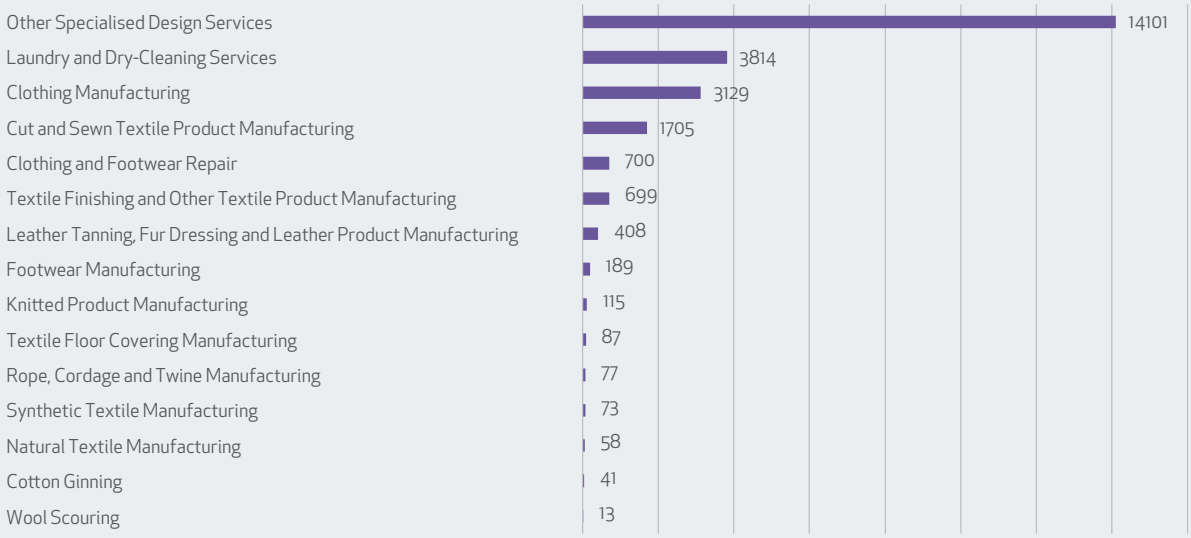
Business Landscape

The Australian TCF Industry continues to face vigorous competition from imports. Some businesses are realigning their operations to a global supply chain, others are focusing on the supply of specialised or niche products to targeted markets. Nonetheless, between 2014-15 and 2015-16, exports across this industry decreased by over 2% and imports increased by over 15%.[2]

There were just over 25,200 businesses operating in the TCF Industry at the end of June 2016, with nearly 85% located in New South Wales, Victoria and Queensland. Figure 1 shows the number of businesses by ANZSIC class at June 2016 and Figure 1a shows the spread of these businesses across Australia.

While Other Specialised Design Services[3] made up 56% of the TCF businesses in 2016, it is likely that only a small percentage of these businesses relate solely to TCF activities. Laundry and Dry Cleaning Services accounted for 15% of TCF businesses.

Figure 1 – TCF Businesses by ANZSIC Class at June 2016



SOURCE for Business Counts: ABS publication 8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2012 to Jun 2016

2 Department of Industry, Innovation and Science, Manufacturing Performance Report, 2017.

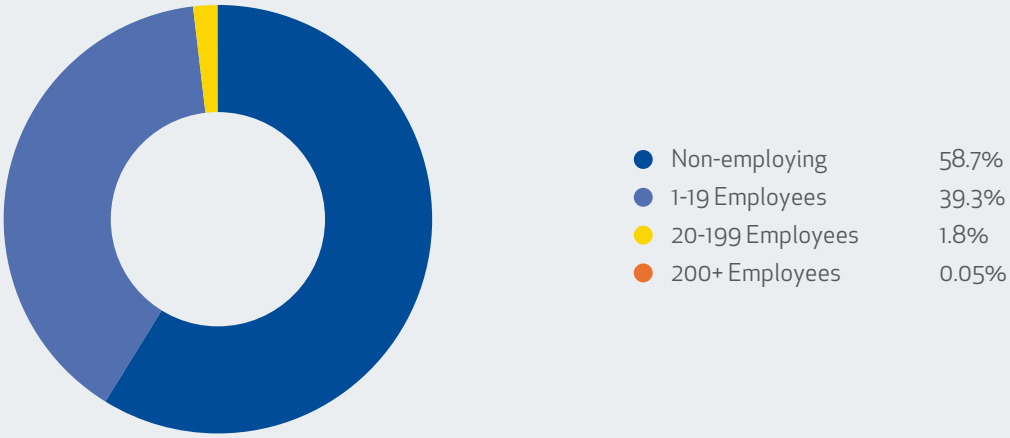
3 Note: Other Specialised Design Services includes Fashion Design and Textile Design.

Figure 1a – Number of Businesses in TCF industries by State, June 2016

SOURCE for Business Counts: ABS publication 8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2012 to Jun 2016

Figure 2 shows that the majority of TCF businesses (nearly 60%) do not have employees. A few businesses employ more than 200 people and the majority of those are in the Laundry Services sub-sector of the industry, which is growing as a result of the increase in demand for tourist accommodation, aged care services, hospitals[4] and use in correctional facilities.

Figure 2 – TCF Businesses by employment numbers at June 2016[5]



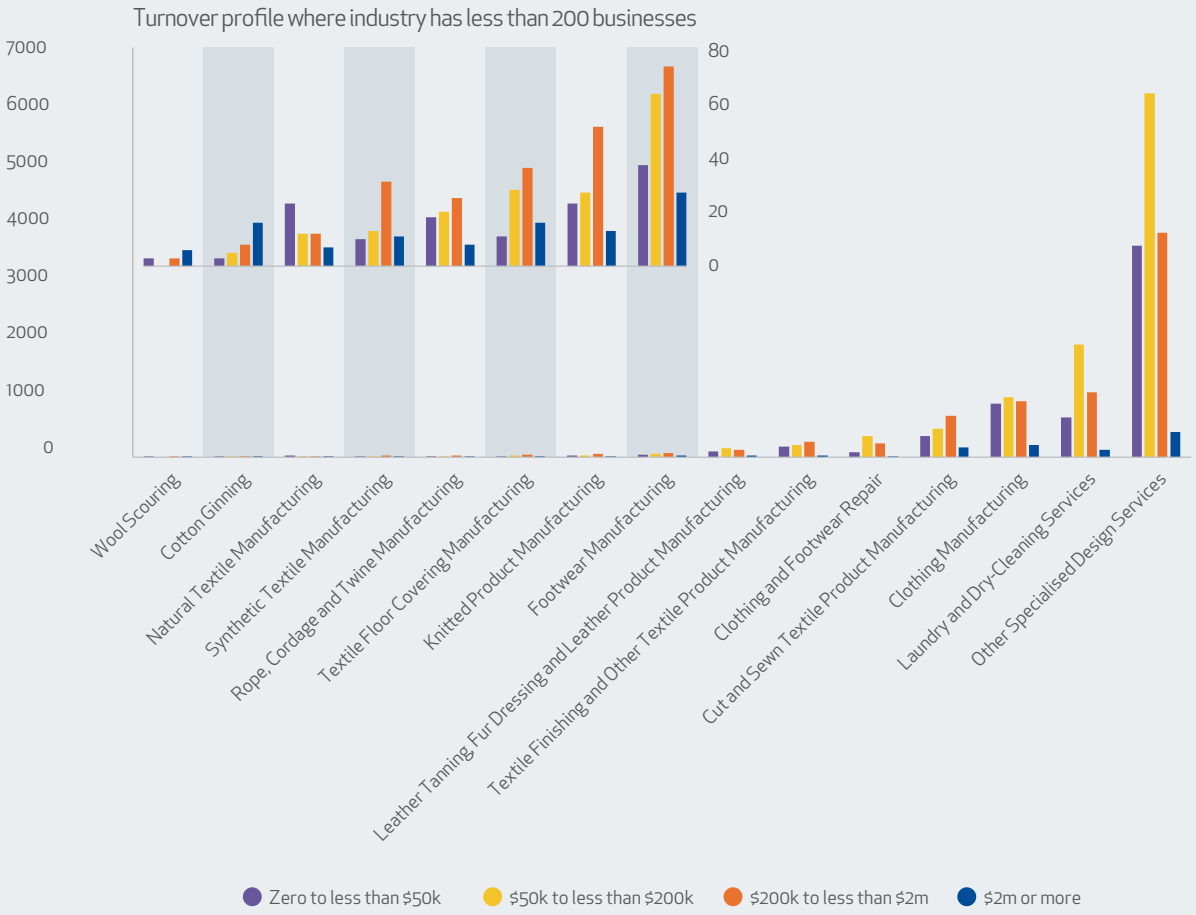
Source: ABS publication 8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2012 to Jun 2016

4 ABS publication 8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2012 to Jun 2016

5 This data was drawn from ABS data but industry feedback indicates that this does not represent the actual number of businesses by employment numbers.

TCF businesses range in size, with nearly 25% of the total TCF businesses turning over less than $50,000 and around 66% turning over less than $200,000. Fluctuations in work are leading many TCF businesses to subcontract services and concentrate on their core business activity.

Figure 3 – Number of Businesses in TCF industries by turnover at June 2016



Source: ABS publication 8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2012 to Jun 2016

Laundry and Dry Cleaning

Laundry and Dry Cleaning Services includes businesses that provide dry cleaning, laundering, linen and uniform hire (in conjunction with laundering services) and laundrette services. General laundry workers, dry cleaners, ironers and pressers are key job roles in this sector.

Downstream industries such as healthcare, accommodation and hospitality have been increasingly outsourcing laundry services in a bid to cut costs and improve efficiencies. Contract management is becoming more important in terms of understanding and interpreting expectations and service requirements and standards. On-premise laundries are in decline in favour of outsourcing but still exist in sectors such as hotels, aged care and hospital facilities. Large commercial laundries are taking over the smaller players and through consolidation and automation are reducing labour inputs, which is leading to a 'deskilling' of some of the work required and upskilling in computer literacy and areas like data analytics.

New skill requirements are expected as environmental factors and standards become increasingly important for the industry over the next five years, particularly those regarding the storage and disposal of chemicals and wastewater. Infection control and hygienically driven cleaning is becoming an ever-increasing requirement, especially for the aged care and health sectors. Specialist laundries are also required to comply with washing, drying and handling standards regarding linen used in the health industry. Industry revenue is projected to increase at an annualised average of nearly 3% over the five years through 2021-22 to reach $2.4 billion, largely underpinned by the growth in nursing homes and retirement villages.[6]

New equipment used by laundry operators such as Programmable Logic Controllers (PLCs) and productivity data capture devices are improving efficiency, reducing emissions and energy consumption, recycling more perchloroethylene (PERC) per cycle, and improving volume capacity. This is in line with increasing customer service expectations of the industry. Barcoding, such as Radio Frequency Identification Devices, is assisting with stock control and traceability which is important for infection containment.

Dry cleaners are generally stand-alone, small, often family-owned businesses that are increasingly being asked to demonstrate greener and more sustainable operations, and provide higher levels of customer service in the form of advice and value-add services like mending and alterations. Compliance and standards are important but not always well understood and implemented, and the current inconsistencies in legislation across jurisdictions lead to confusion for national operators. Work is often manual and physical which makes it less attractive than laundry work.

6 IBISWorld S9531 Laundry and Dry Cleaning Services in Australia Industry report, May 2017

Synthetic and Natural Textile Manufacturing

This manufacturing sector is primarily engaged in wool scouring, spinning yarns and weaving fabrics predominantly made of natural and synthetic fibres. This sector typically employs weaving, yarn carding, and spinning machine operators.

Technical Textiles are synthetic fibres designed to have high-level physical, mechanical, thermal or chemical properties for use in specific applications within industrial sectors such as earthworks, construction, civil engineering, transport, defence, medical and healthcare.

Non-Woven Fabrics are broadly defined as sheet or web structures bonded together by entangling fibre or filaments, and by perforating films mechanically, thermally, or chemically. They are flat, porous sheets that are made directly from separate fibres or from molten plastic or plastic film. They are not made by weaving or knitting and do not require fibres to be converted to yarn.

Smart Textiles can sense and react to environmental conditions and external stimuli. Embedded sensors in the textile are sensitive to various parameters such as temperature, strain, chemical, biological and other substances. They are used in agriculture, building and construction, clothing, environment, geological, household, industrial, medical and hygiene, transport, packaging, protection, and sports sectors.

Businesses in this sector have been and are significantly affected by intense competition from low-cost overseas competitors, exchange rate fluctuations and contractions in domestic downstream industries. Industry revenue is forecast to decline at an annualised average rate of over 2% over the five years through 2021-22 to total nearly $465 million, while import competition is projected to increase over the same period to account for 85% of domestic demand by 2021-22.[7] Changing consumer practices away from low-cost products to high-quality items and ethical buying trends are, however, expected to help the sector.

Research and development is fuelling new opportunities in areas such as:[8]

- carbon fibres and composites in clothing and footwear
- functional fibrous materials used in medical textiles, super hydrophobic textiles and protective garments and gloves
- nanofibres used in filtration, tissue engineering, energy generation and reinforcement and sensors
- polymers used for advanced thermosets for high-performance coatings, adhesives and composites; biodegradable polymers for biomedical applications
- green processing of natural fibres.

7 IBISWorld C1310 Synthetic and Natural Textile Manufacturing in Australia Industry Report, April 2017

8 http://www.deakin.edu.au/ifm/research-centres/affric

Tailoring Services and Clothing Accessories[9]

This sector has been, and still is, largely affected by low-cost producers, fluctuations in the Australian dollar, and retail market conditions which have softened recently. Global competition is growing and the sector continues to adjust by either moving operations offshore or closing, with the number of enterprises decreasing by over 35% between 2007-08 and 2016-17 and the number of workers decreasing by over 20% for the same period.[10] However Industry consultations identified examples of successful small niche operators manufacturing high-value niche products and using brand awareness and social media to market their products.

Industry consultations also indicated that finding skilled labour can be problematic, as there is presently a shortage of some skills – in particular, pattern makers and skilled sewers – with many workers either approaching retirement or whose training has been limited to specific, on-the-job instruction in lieu of accredited training.

Cut and Sewn Textiles

The manufacture of household textiles is impacted by low-cost imports, fluctuations in the Australian dollar and tariff reductions which have led to offshoring of operations and some business closures. These manufacturers produce household textiles and other textiles such as tents, shade fabrics, sails and tarpaulins.

Australian manufacturers of canvas products and shade sails are more competitive due to the bulky nature of the products, making transport costs high and imports not as competitive. This creates local opportunities to transform base product into finished items.

The number of enterprises decreased by over 20% between 2007-08 and 2016-17 and the number of workers decreased by over 25% for the same period.[11] Automation, robotics and offshoring of production continue to play a significant role in the reduction of workforce numbers.

Consultations indicated that access to skilled textile workers can be a problem for employers with the offer of higher salaries, less demanding work and broader career opportunities luring potential candidates away from the industry in Australia. Others are said to be influenced by the negative press associated with the Australian manufacturing sector.

9 'Tailoring services' include hem stitching, button holing and basque knitting which service clothing manufacturers. 'Clothing accessories' include ties, gloves, belts, shoelaces and handkerchiefs.

10 IBISWorld C1351D Tailoring and Clothing Accessories Manufacturing in Australia Industry Report (Feb 2017)

11 IBISWorld C1333 Cut and Sewn Textile Product Manufacturing in Australia Industry Report (Feb 2017)

Clothing Production

Manufacturing of mass-produced, low value garments has largely moved offshore to producers of low-cost per unit clothing. Some businesses remain viable by offering boutique brands, ethical local manufactured garments and designer clothes customised to Australian markets. Another successful segment of the industry has targeted niche markets, including specialised sectors such as clothing for defence, emergency services, mining and healthcare services. Clothing for these markets requires the manufacturer to have specific knowledge about product specifications and textile performance.

The number of enterprises making women's and girls' clothing decreased by 5% between 2007-08 and 2016-17 and the number of workers decreased by over 30% for the same period.[12] The number of enterprises making men's and boys' clothing decreased by over 50% between 2007-08 and 2016-17 and the number of workers decreased by over 30% for the same period.[13]

Consultation feedback indicated that consumer trends away from traditional retailers to online retailers are also impacting businesses, which are now looking for ways to differentiate themselves and cut out the 'middleman'. Online retailing is highly competitive and success requires nimbleness in responding to trends, ease of website use and clear, consistent information (e.g. sizing) for customers demanding high levels of service and after-sales service such as simple, user friendly methods for returning and exchanging products.

Ethical Clothing Accreditation, which accredits brands for meeting minimum labor standards in their Australian supply chain, is becoming increasingly important. The 2018 Ethical Fashion Report notes a positive trend in the global fashion industry in regard to improved reporting and transparency around supply chain practices; in 2013 only 16% of companies published supplier lists. In 2018 this number had more than doubled to 34%[14]. Consultations also indicated the need for specialised skills in supply chain management and marketing, in addition to cutting, sewing, pattern making and grading and sizing.

12 IBISWorld C1351B Women's and Girls' Wear Manufacturing in Australia Industry Report, June 2017

13 IBISWorld C1351A Men's and Boys' Wear Manufacturing in Australia Industry Report, June 2017

14 The 2018 Ethical Fashion Report, The Truth Behind the Barcode

Fashion

In recent decades, the fashion industry has been an engine for global development. One of the world's largest consumer industries, generating almost $2.4 trillion in annual apparel and footwear revenues in 2016, it employs around 60 million people along its value chain.[15]

Offshoring of Australian manufacturing of fashion has been occurring for some time. International fast-fashion retailers continue to build Australian market share with sophisticated supply chains using radio frequency identification technology to track items and manage stock movement and product performance.[16]

Environmental pressures, including water consumption, waste creation, energy emissions, chemical usage and land use, and labour practices are putting this global industry at risk.[17] These pressures may offer Australia a unique opportunity to regain market share. There is mounting evidence of trends in buying local and ethical buying occurring in Australia, providing opportunities for fashion designers to design and produce for an Australian market. Examples include wedding dresses, uniforms and accessories. The industry needs skills that were never considered before simply to keep abreast of an ever-growing and sophisticated global market that is increasingly digital and technologically focused.[18] These skills include data analytics, use of social media and mobile technologies.

In addition, the 'sharing economy' offers people the opportunity to not only hire a dress but also the chance to rent out their fashion designer items. As online retailing grows with increased internet penetration and online shopping portals, so does the popularity of clothing rental which is expected to grow by offering a cost-effective option for the fashion-conscious.[19] Rental companies are disrupting the apparel market with virtual fitting rooms and augmented reality and this is anticipated to expand from niche markets like unique designer apparel and special occasions to the broader fashion industry.[20]

Enrolments in fashion design qualifications continue to be strong, with some industry figures arguing this is not a good fit with where the jobs are on offer in the broader industry. Industry advocates, on the other hand, argue that the future fashion industry needs creative, innovative, visual thinkers and these are abilities which are often sought in other industries, allowing fashion graduates to transfer their skills if they cannot gain direct employment in fashion. Key job roles in this sector include buyer, merchandiser and fashion designer.

15 Boston Consulting Group 2017 Pulse of the Fashion Industry

16 http://www.smh.com.au/business/retail/stitched-up-how-the-global-giants-are-squeezing-out-australian-fashion-20170209-gu9arc.html

17 Boston Consulting Group 2017 Pulse of the Fashion Industry

18 Corner, Frances. 2014. 'Are We Producing Too Many Fashion Designers?' Business of Fashion, 12/02/2014. http://www.businessoffashion.com/articles/opinion/op-ed-producing-many-fashion-designers

19 https://www.prnewswire.com/news-releases/online-clothing-rental-market-is-expected-to-reach--1856-million-globally-by-2023---allied-market-research-618522543.html

20 https://www.fungglobalretailtech.com/research/deep-dive-millennial-lifestyles-drive-growth-apparel-rental

Clothing and Footwear Repair

Clothing and footwear repair continues to do well, with the trend to recycle and upcycle buoying the sector's forecast for annualised average revenue increase of over 2% over the five years to 2022-23.[21]

There are a large number of small independent operators in this labour-intensive sector and a few large operators that are currently expanding their networks and building operational efficiencies, mainly through point of sale systems. With the growth in online shopping, clothing alterations historically undertaken by tailors and seamstresses are now increasingly being done by national industry operators offering accessibility and quick turnaround times.

Inconsistent standards on sizing and labelling combined with online buying are also driving consumers to increasingly seek out these types of services.

Leather and Footwear Production

The Leather and Leather Substitute Product Manufacturing sector includes operators that produce and process leather hides and other animal skins, as well as manufacturers of leather (and leather substitute) products like wallets, saddles and handbags.

Offshoring of leather processing to low-cost countries has seen the number of businesses in Australia decline by nearly 35% from over 600 in 2006-07 to over 400 in 2016-17, and employment numbers decline by nearly 40% from 2,800 in 2006-07 to 1,800 in 2016-17.[22] Specialised skills are required for handmade leather goods which are experiencing some resurgence.

21 IBISWorld S9491 Clothing and Footwear Repair in Australia Industry Report Oct 2017

22 IBISWorld C1320 Leather and leather Substitute Product Manufacturing in Australia Industry, Feb2017.

Key Industry Stakeholders

Australian Fashion Council – promotes the growth of the textile and fashion industry in Australia.

Australian Hide, Skin and Leather Exports Association – represents the major exporters of Australian cattle hides, calf skins, sheep and lamb skins, kangaroo skins and goat skins.

Blind Manufacturers' Association of Australia – represents manufacturers and component suppliers of blinds, awnings and shutters.

Dry Cleaning Institute of Australia – represents dry cleaners in Australia with branches in every state and territory and offers assistance to its members in the various areas of small business and dry cleaning industry-related matters.

Food, Fibre and Timber Industries Training Council – provides an interface between the WA government and industry on the training and workforce development needs of the food, fibre and timber industries.

Laundry Association Australia – represents companies in the rental of textiles and commercial laundering and re-distribution of textile products; suppliers including laundry equipment manufacturers, distributors, consumable and chemical suppliers specific to the industry.

Specialised Textiles Association – represents fabricators, installers and suppliers of textiles, equipment, accessories and services in the specialised textiles industry including awnings and blinds, shade sails, tarpaulins, bladders, camping annexes and yacht sails.

Technical Textiles and Nonwoven Textiles Association – works to advance the interests of the Australian industry worldwide by fostering an internationally competitive and innovative industry and growth of an appropriately skilled and sustainable workforce.

The Millinery Association of Australia Inc. – is committed to promoting millinery items and events showcasing the work of members.

Training Snapshot

Learner Training Profile

In 2016, a learner enrolled in a qualification from the MST Textiles, Clothing and Footwear Training Package was more likely to be:

- Enrolled in a Certificate II level qualification
- Studying in New South Wales
- Aged 19 years or younger
- Female
- Not an apprentice or trainee
- Enrolled with a TAFE Institute.

Over the period 2014-2016:

- The total number of enrolments in MST Textiles, Clothing and Footwear Training Package qualifications has declined by 17.3% (from 8,093 down to 6,692)
- Enrolments declined in all jurisdictions except South Australia and Western Australia, where there was growth of 6% and 36% respectively
- Enrolments in the Certificate I qualification increased while enrolments at other AQF levels fell
- Unlike most other areas of the manufacturing sector, there are more women than men enrolling in MST Textiles, Clothing and Footwear qualifications. Females make up over 80% of enrolments, although numbers have declined by 21% over the period. Enrolments by males remained consistent between 2014 and 2016.

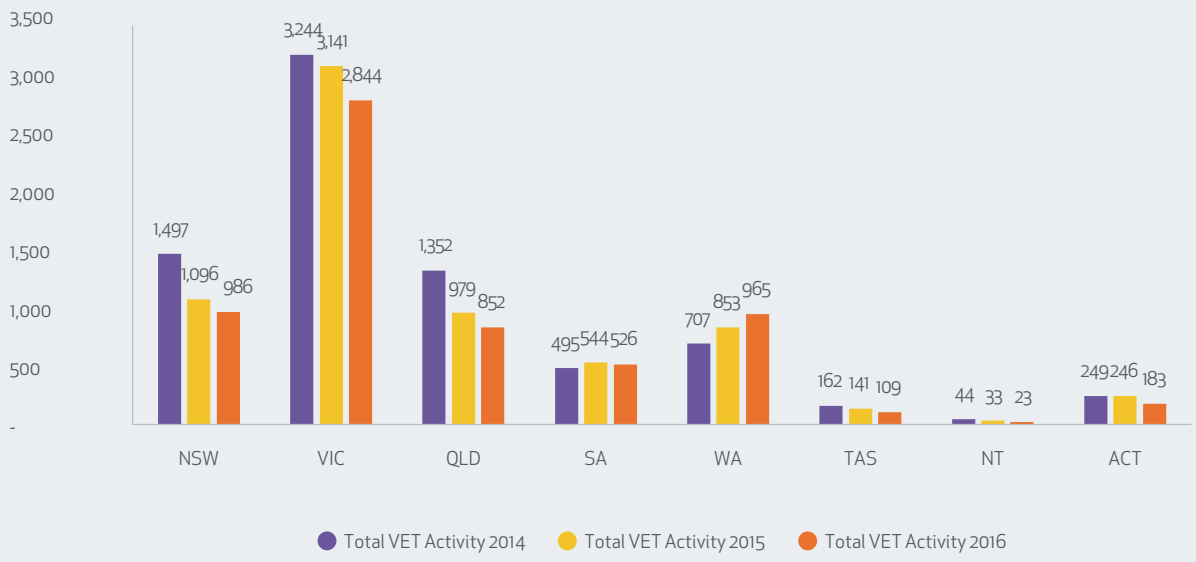
Overall apprentice/trainee program enrolments provided in **Appendix A** indicate a decline from 558 enrolments in 2014 to 264 enrolments in 2016.

Appendix A presents a graphical snapshot of enrolment data from the MST Textiles, Clothing and Footwear Training Package.

Training Delivery

Figure 4 illustrates how enrolments in MST Textiles, Clothing and Footwear Training Package qualifications are dominated by the eastern states and particularly Victoria. This is consistent with Victoria's historical concentration of textiles, clothing and footwear manufacturers. This figure also illustrates the declining enrolments since 2014 in all jurisdictions except for South Australia and Western Australia.

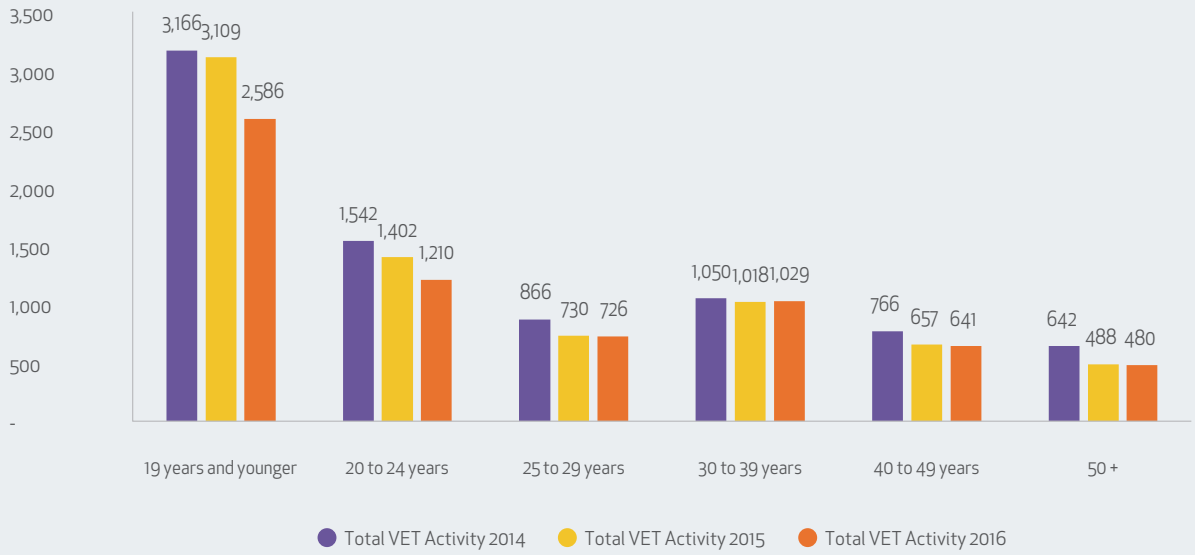
Figure 4 – Program enrolments in MST Textiles, Clothing and Footwear qualifications by State/Territory of student residence, 2014-2016 Total VET Activity



Source: VOCSTATS https://www.ncver.edu.au/data/data/vocstats/vocstats, extracted 18/9/2017

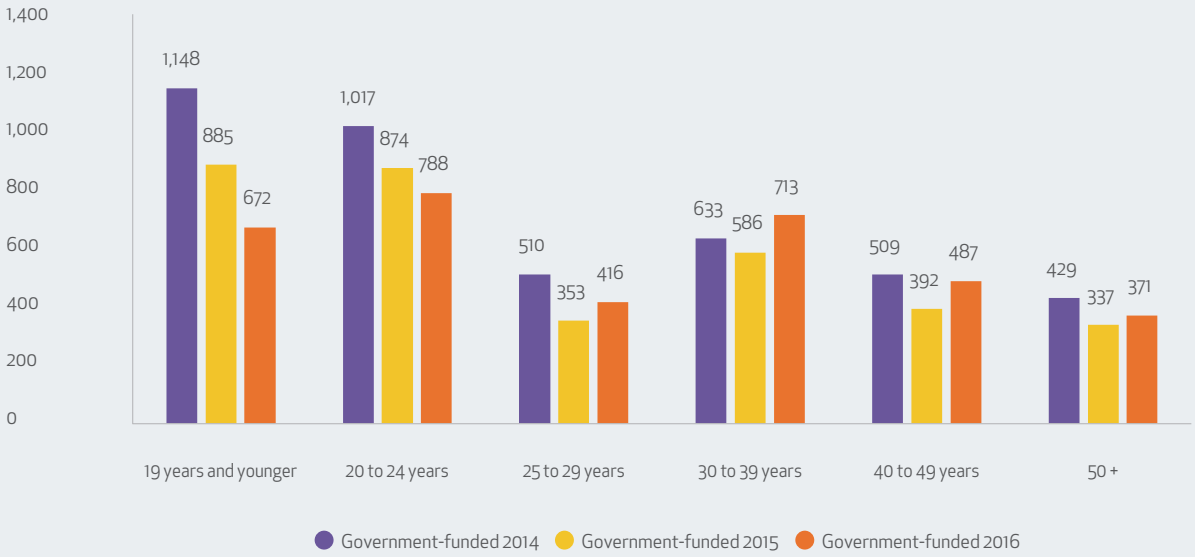
Total VET Activity enrolments in MST Textiles, Clothing and Footwear qualifications are dominated by the 24-and-under age groups, despite declines in government-funded enrolments. This suggests industry and self-funded training is being used to meet industry need and learner preferences.

Figure 5 – Program enrolments in MST Textiles, Clothing and Footwear qualifications by Age Group, 2014-2016 Total VET Activity



Source: VOCSTATS https://www.ncver.edu.au/data/data/vocstats/vocstats, extracted 18/9/2017

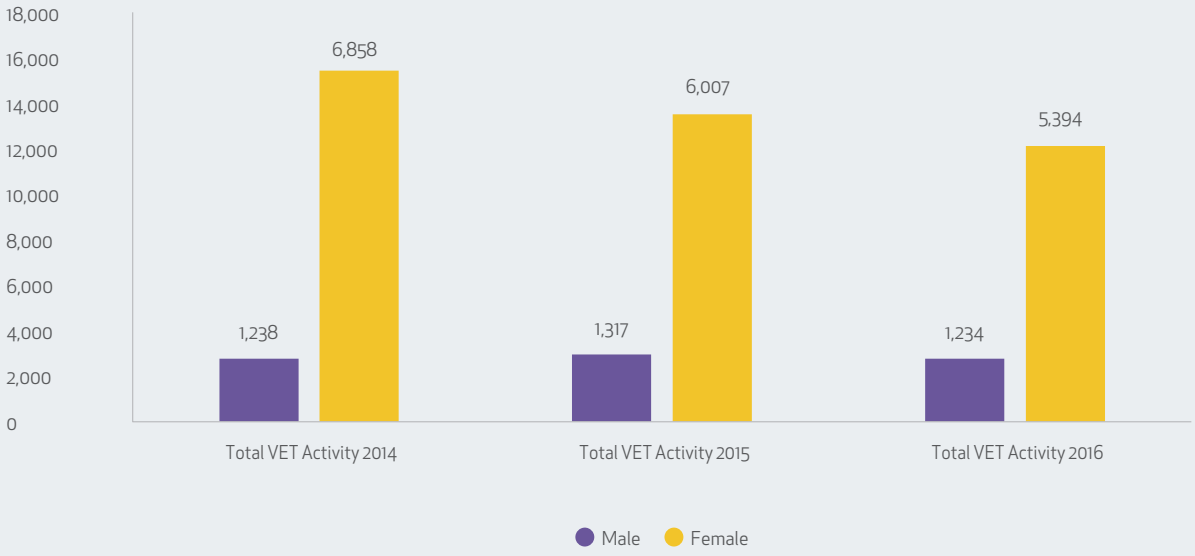
Figure 5a – Program enrolments in MST Textiles, Clothing and Footwear qualifications by Age Group, 2014-2016 Government-funded



Source: VOCSTATS https://www.ncver.edu.au/data/data/vocstats/vocstats, extracted 18/9/2017

Total VET female enrolments declined by 21% between 2014 and 2016, while male enrolments remained stable. Females accounted for 81% of Total VET enrolments in 2016 which is a slight decline from 85% in 2014.

Figure 6 – Program enrolments in MST Textiles, Clothing and Footwear qualifications by Sex, 2014-2016 Total VET Activity



Source: VOCSTATS https://www.ncver.edu.au/data/data/vocstats/vocstats, extracted 18/9/2017

Program enrolments in MST Textiles, Clothing and Footwear qualifications are dominated by females, who have been traditionally associated with employment in this industry. Female government-funded enrolments declined by around 55% between 2011 and 2016 while male government-funded enrolments in 2016 are at similar levels to 2011. Females accounted for nearly 85% of MST Textiles, Clothing and Footwear enrolments in 2011 and dropped to about 70% in 2016.

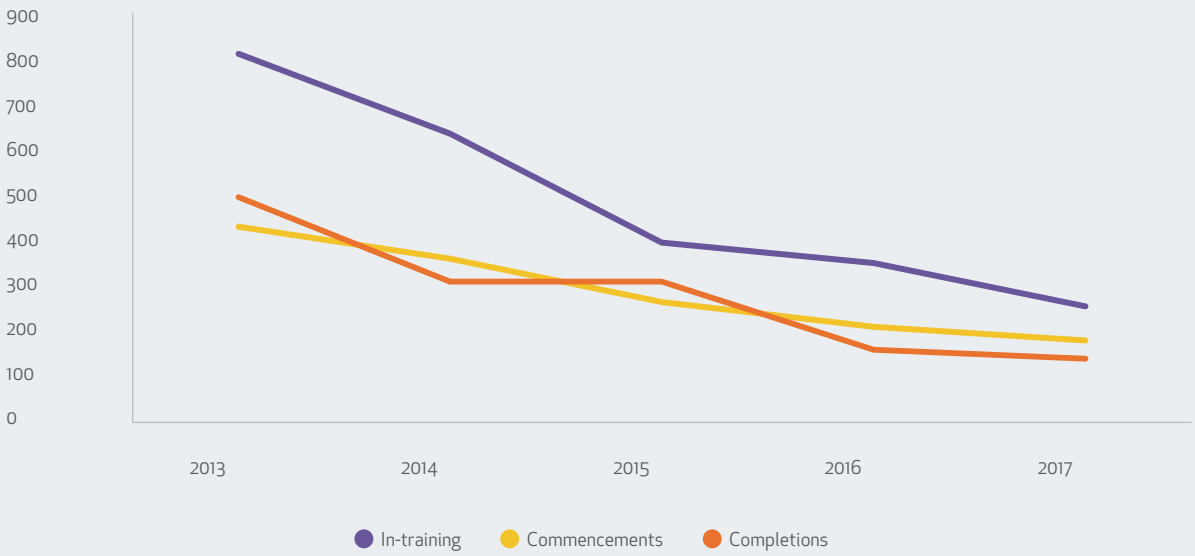
Figure 6a – Program enrolments in MST Textiles, Clothing and Footwear qualifications by Sex, 2011-2016 Government-funded

Source: VOCSTATS https://www.ncver.edu.au/data/data/vocstats/vocstats, extracted 18/9/2017

Industry advice is that often people from Culturally and Linguistically Diverse (CALD) backgrounds work in low-skilled jobs in the Textiles, Clothing and Footwear Industry offered in places like laundries, dry cleaners and production clothing manufacturers. In their view, funding to adequately support training delivery to these cohorts is one mechanism to ensure that Foundation Skills, Language Literacy and Numeracy (LLN) and other employability skills are addressed.

Industry feedback further suggests that attracting new entrants is becoming problematic. This is particularly so for less visible occupations such as workers in canvas trimming, clothing alterations and laundries. Given that career influencers like parents and careers advisers are typically unaware of these industry sub-sectors, young people may be missing out on career information regarding areas where there is a genuine demand for labour. Figure 7 shows major declines in Apprentice and Trainee commencements (over 65%) and in-training (over 75%) over the 2013-17 period, with declines in completions seemingly levelling off. This overall level of decline is a concerning trend for the industry, which is seeking new entrants with skills to build on industry opportunities. During industry consultations there was a call for the development of new apprentice models that better address contemporary society and work.

Figure 7 – MST Textiles, Clothing and Footwear Apprentices and Trainees: June 2013-2017 Commencements, In-Training and Completions.

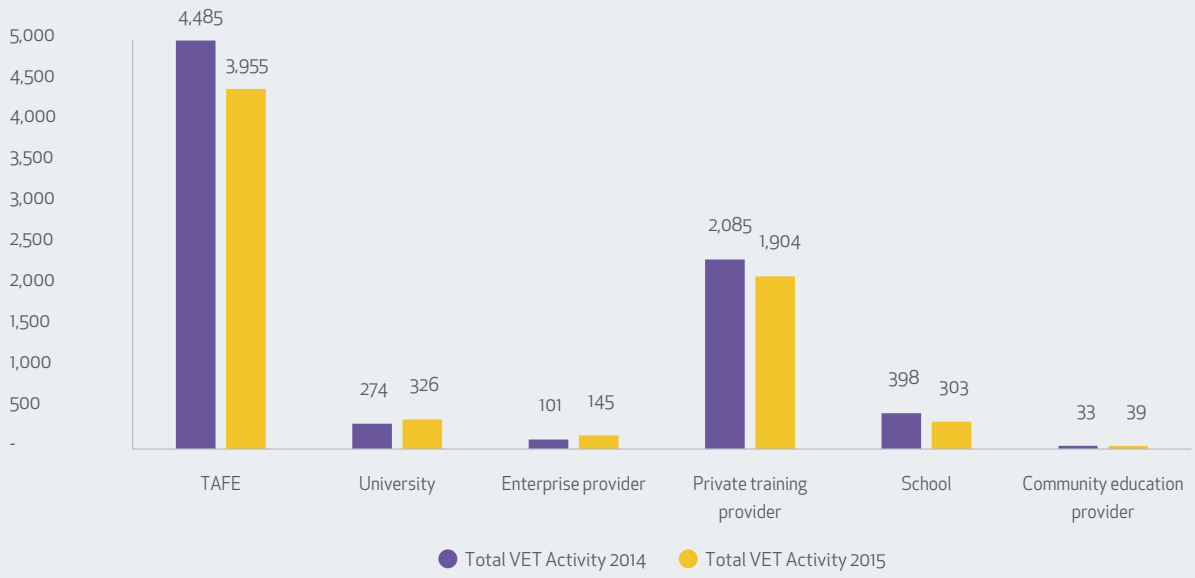


Source: VOCSTATS Apprenticeships and Traineeships Collection extracted on 10 January 2018

Total VET enrolments in MST Textiles, Clothing and Footwear fell by nearly 10% between 2015 and 2016. TAFE institutes continue to be the largest provider of training to the TCF Industry with around 60% of training delivered by TAFE institutes. Enterprise RTOs and universities had small enrolment increases over this period.

University providers are expected to take on a bigger share of the training delivery in the near future, as demand for higher education qualifications increases and universities are able to offer a seamless pathway from paraprofessional Diplomas, Advanced Diplomas and Associate Degrees through to graduate and postgraduate qualifications. Industry has raised some initial concerns regarding the practical skills that university graduates may gain and their application in the workplace.

Figure 8 – Program enrolments in MST Textiles, Clothing and Footwear qualifications by Training Organisation type 2015-2016 Total VET Activity



Source: VOCSTATS https://www.ncver.edu.au/data/data/vocstats/vocstats, extracted 18/9/2017

As of April 2018, there were just over 200 RTOs with the MST Textiles Clothing and Footwear Training Package on scope, with many of these registered to deliver in more than one jurisdiction, and others having scope to deliver in only one state or territory.

Of the 23 qualifications offered in the MST Textiles, Clothing and Footwear Training Package, four are on the scope of only one RTO. By contrast, each of the five qualifications in Applied Fashion Design and Technology are listed on the scope of at least 15 RTOs.

Table 2 – Number of RTOs with the MST Textiles Clothing and Footwear Training Package on scope

MST Textiles, Clothing and Footwear Training Package Qualifications	Number RTOS with Scope
MST20216 Certificate II in TCF Production Operations	3
MST20516 Certificate II in TCF Services and Repair	0
MST20616 Certificate II in Applied Fashion Design and Technology	37
MST20116 Certificate II in TCF Production Support	2
MST20416 Certificate II in Laundry Operations	9
MST20316 Certificate II in Leather Production	1
MST30716 Certificate III in Dry Cleaning Operations	3
MST30116 Certificate III in Clothing and Textile Production	7
MST30816 Certificate III in Applied Fashion Design and Technology	24
MST30516 Certificate III in Leather Production	0
MST30616 Certificate III in Laundry Operations	9
MST30216 Certificate III in Manufactured Textile Products	4
MST30416 Certificate III in Footwear	1
MST30316 Certificate III in Millinery	5
MST40116 Certificate IV in Textile Design, Development and Production	5
MST40416 Certificate IV in Millinery	5
MST40316 Certificate IV in Custom-Made Footwear	2
MST40516 Certificate IV in Applied Fashion Design and Merchandising	18
MST40216 Certificate IV in Clothing Production	5
MST50216 Diploma of Textile Design and Development	5
MST50116 Diploma of Applied Fashion Design and Merchandising	25
MST60116 Advanced Diploma of Applied Fashion Design and Merchandising	18
MST60216 Advanced Diploma of Textile Design and Development	3

Source: MST extracted https://training.gov.au/Training/Details/MST 29 January 2018; LMT extracted from RTO Scope spreadsheet provided by training.gov.au 14 February 2018

Currently, industry have not requested MST Textiles, Clothing and Footwear skill sets to address areas of skills shortage and recognition of prior learning for existing workers.

Table 3 – Number of RTOs with the LMT07 Textiles Clothing and Footwear Training Package on scope

LMT07 Textiles, Clothing and Footwear Training Package Qualifications	Number RTOS with Scope
LMT11107 Certificate I in Textiles Clothing and Footwear	14
LMT20407 Certificate II in Cotton Ginning	1
LMT30307 Certificate III in Cotton Ginning	1
LMT31909Certificate III in Engineering - TCF Mechanic	1
LMT32011 Certificate III in Digitising and Computerised Embroidery	3
LMT40207 Certificate IV in Cotton Ginning	1
LMT40810 Certificate IV in Laundry Operations and Supervision	1
LMT40907 Certificate IV in Supply and Fitting of Pre-manufactured Medical Grade Footwear	0
LMT50207 Diploma of Medical Grade Footwear	0
LMT50407 Diploma of Textile Technology and Production Management	0
LMT60207 Advanced Diploma of Medical Grade Footwear	0

Source: MST extracted
https://training.gov.au/Training/Details/MST 29 January 2018; LMT extracted from RTO Scope spreadsheet provided by training.gov.au 14 February 2018

RTO feedback on new Training Package

As the MST Textiles, Clothing and Footwear Training Package was endorsed in 2016, the IRC was reluctant until recently to make any substantial changes to the training package products until they had some experience and feedback about the new MST Textiles, Clothing and Footwear products.

A comprehensive survey of selected textile, clothing and footwear stakeholders, including the RTOs delivering the new qualifications, has provided the following feedback, with a detailed report provided in **Appendix B**.

A summary of survey findings showed:

- Almost two-thirds of respondents stated that the current qualifications in the MST Textiles, Clothing and Footwear Training Package meet current industry requirements
- Some modification of packaging rules, greater flexibility in delivery and assessment and new skill sets are required to better meet industry requirements
- Learner needs were being met well
- Key trends areas that may influence the training package include technological change, offshore manufacturing, bespoke manufacturing and sustainable manufacturing
- Hygiene and infection control are current skills required for the laundry sector and machine operator skills in pattern making, sewing, buttonhole, overlocking are current skills required for clothing production
- Emerging skill needs include technical skills such as digital capabilities in areas like garment design, pattern making, cutting and sewing, social media, trade skills in textiles, and sustainability and green credentials.

Qualification Uptake

The following four qualifications and the qualifications they superseded rank as the most popular within the MST Textiles, Clothing and Footwear Training Package for 2014, 2015 and 2016 and represent 65% of the 2016 enrolments in TCF qualifications:

- MST20616 Certificate II in Applied Fashion Design and Technology
  (1,877 enrolments in 2016, down from 2,088 enrolments in 2014)
- MST30816 Certificate III in Applied Fashion Design and Technology
  (634 enrolments in 2016, down from 738 enrolments in 2014)
- MST40516 Certificate IV in Applied Fashion Design and Merchandising
  (564 enrolments in 2016, down from 1,200 enrolments in 2014)
- MST50116 Diploma of Applied Fashion Design and Merchandising
  (1,258 enrolments in 2016, down slightly from 1,309 enrolments in 2014)

Some RTOs analyse job advertisements both locally and globally and use this information to package curriculum to meet current and future needs. A recent study identified the following three key job requirements:

- construction knowledge and expertise
- pattern, grade and fit expertise
- textile testing and fabrication knowledge.[23]

Industry feedback indicates that courses such as Fashion Design may be over-subscribed when compared to the number of positions available in Australia. This is further supported by the identification of the top four qualifications in terms of enrolments in the MST Textiles, Clothing and Footwear Training Package which all relate to Applied Fashion Design. On the other hand, enrolments in Clothing Production qualifications, which lead to skill development in machining and clothing alterations, are far less popular (154 enrolments in 2016) but address current skill shortages in sewing machining, clothing alterations, and pattern making.

Laundry operations qualifications have shown low enrolments for some time (415 enrolments in 2016, down from 613 in 2014), but this is largely explained by a lack of visibility of qualifications and accessibility of training providers, with some jurisdictions not supported at all. Additionally, while some laundry industry figures report a broad loss of faith in current training arrangements, many still express an interest in quality employment-based training to meet the sector's needs. Industry feedback indicates that changes in the qualifications are required to provide more flexibility to meet the various workplace skill requirements.

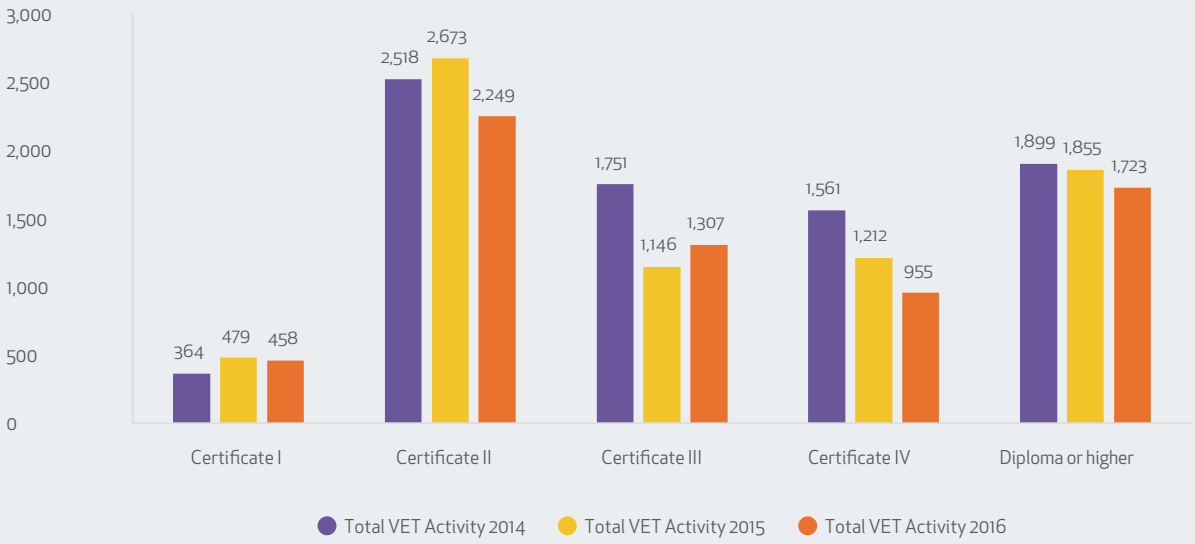
There is insufficient data to comment on completion trends for the 2016 endorsed MST Textiles, Clothing and Footwear Training Package, but this will be monitored in an effort to measure the effectiveness of the recently reviewed qualifications in improving previously declining completion trends.

23 TAFE Queensland. Fashion Vacancies Snapshot, December 2017.

Funding of qualifications is a significant determinant of enrolments and completions. Industry feedback indicates that variations in state funding are problematic locally as they often lag behind demand for skills, and for employers operating on a national basis it remains difficult to access funding seamlessly. Industry advice is that although many employers prefer employment-based training it is costly, difficult for small businesses to manage and the quality is not always to the required standard. Industry feedback indicates this is a significant issue in Western Australia where low-quality employment-based training by out-of-state providers has put employers offside.

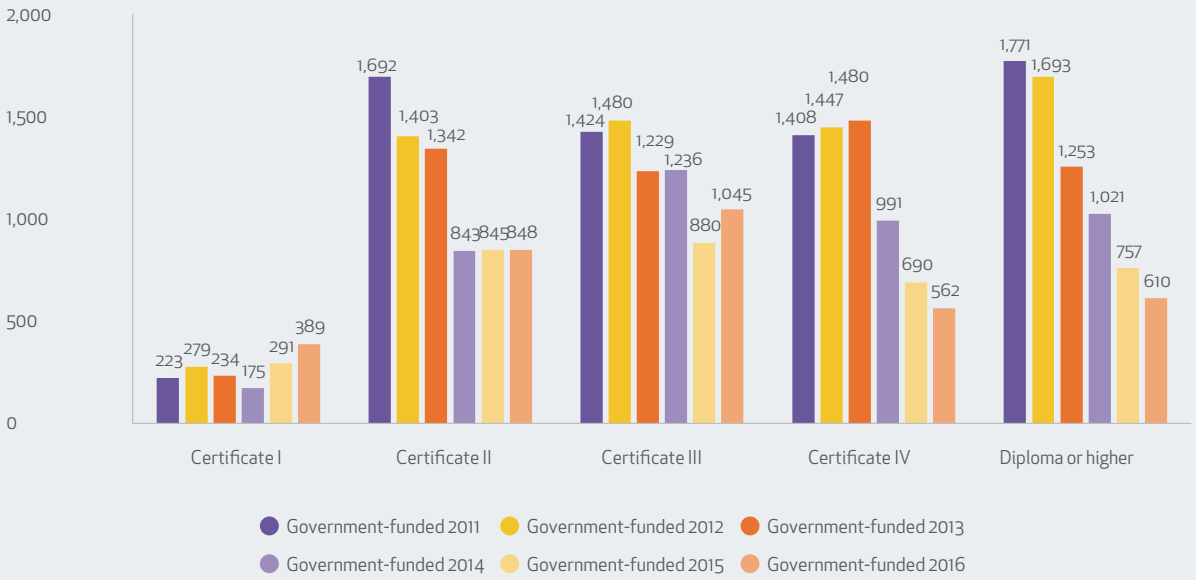
Government-funded enrolments have fallen in Certificate III and above for the 2011-16 period, with enrolments in Total VET Activity also trending down during 2014-16. Anecdotal industry feedback suggests that enrolments in higher education qualifications at Australian Qualifications Framework Levels 5 and 6 have risen and this may be impacting Total VET Activity.

Figure 9 – Program enrolments by qualification level in Textiles, Clothing and Footwear qualifications, 2014-2016 Total VET Activity.



Source: VOCSTATS https://www.ncver.edu.au/data/data/vocstats/vocstats, extracted 18/9/2017

Figure 9a – Program enrolments by qualification level in Textiles, Clothing and Footwear qualifications, 2011-2016 Government-funded.



Source: VOCSTATS https://www.ncver.edu.au/data/data/vocstats/vocstats, extracted 18/9/2017

Challenges and Opportunities

For Industry and Employers

Supply-side Challenges and Opportunities

Technology

Widespread commercial use of 3D printing in Australia is still a way off, but already machine manufacturing and the concept of printing garments is possible for knitwear. New knitwear technology allows designers to program machinery to create a whole knitted garment in as little as 40 minutes, thus overcoming the issue of high labour costs and allowing designers to better control production and reduce wastage.[24] Automation can largely take over from tasks that are repetitive, physically demanding and hazardous, resulting in reskilling requirements for employees to learn machine monitoring, calibration and maintenance tasks. In some cases, complete jobs are being replaced, while for others augmentation is expected to extend workers' capabilities. Creativity, emotional intelligence and transferrable skills are also expected to be in higher demand in the future.[25] In addition, new skills are required by the industry for new functions including provenance, due diligence and 'customer fit' alongside customer service and expert garment and textile knowledge.

Research by the former Department of Employment found that more than two-thirds of Australian employers place at least as much emphasis, if not more, on employability skills as they do on technical skills.[26] This was further reinforced during industry consultations with calls for soft skills and STEM skills to feature more prominently in training for the industry's future skill needs.

The introduction of smart materials and digital technology in textiles will allow smart textiles to sense, illuminate, communicate, transform energy, monitor health, and even provide protection from environmental hazards. Embedded sensors in the textiles are sensitive to various parameters such as temperature, strain, chemical, biological and other substances. The applications of smart clothing are being realised with examples such as fitness pants that come with built-in haptic vibrations[27], smart bikinis that include a waterproof sensor to monitor an individual's time in the sun, smart running shorts to monitor ground contact, socks that track a person's running and use artificial intelligence to offer coaching, and weight-loss vests that burn calories.[28]

24 CEA. 2016. 'Fireside Chat: What's next for Australian fashion?' 05/08/16. http://qutcea.com/2016/08/05/australian-fashion-influencers/

25 Business Council of Australia, 2017, Future-proof: protecting Australians through education and skills, Melbourne, viewed 13 October 2017, http://www.bca.com.au/publications/future-proof-protecting-australians-through-education-and-skills

26 Department of Employment 2017, Australian Jobs 2017, Australian Government, Canberra, viewed 2 September 2017, https://docs.employment.gov.au/system/files/doc/other/australianjobs2017.pdf

27 Haptic vibration is the use of the sense of touch in a user interface design to provide information to an end user.

28 https://www.wareable.com/smart-clothing/best-smart-clothing

Smart technical textiles and clothing can also be life-savers in harsh working environments (e.g. mines or disaster relief) by measuring critical indicators such as respiration, heart rate or dangerous gases in the working environment and providing real-time feedback. Wearable textiles are expected to provide both employment and opportunities for small and medium enterprises. The global wearables market is expected to reach over $150bn by 2026[29], with predictions that smart garments will be the fastest-growing category over the next ten years. Future wearables are expected to be shapeable, stretchable, washable and cleanable on-demand, e.g. in the case of textiles and clothing (a wearable should indeed look like natural clothing because of comfortability, breathability and washability).

The advancement of sensing technologies, embedded systems, wireless communication technologies, nano technologies, and miniaturisation makes it possible to develop smart systems to continuously monitor the activities of human beings. Wearable sensors detect abnormal and unforeseen situations by monitoring physiological parameters along with other symptoms. With an ageing population and increased healthcare costs, the opportunities for human monitoring are profound. Artificial intelligence is expected to offer the technology to onshore work as labour inputs are reduced by the use of robots.

The challenges and opportunities provided by technology including Computer Aided Design (CAD), Electronic Pattern Making and Additive Manufacturing to produce prototypes were raised during consultations to inform this report.

Digitisation

The general workforce, including those engaged in low-skilled occupations, require digital skills to navigate through workplaces that are becoming highly mechanised and digitised. The use of computer hardware and software in processing data and information from organisational databases, as well as for sourcing information and social media, is a common workplace skill requirement.

The digitisation of the economy offers great opportunities for Australia, making its traditional geographic distance from world markets less relevant. This is particularly the case with respect to Industry 4.0 including the Internet of Things technologies that leverage new digital and machine learning techniques into the production process.

By 2026, the Australian Manufacturing Growth Centre estimates that Australia's manufacturing workforce will consist of an additional 47,000 high-skill jobs involving elite design or technical expertise, as well as 31,000 more sales and service workers. By contrast, it expects there will be 55,000 fewer manual or narrowly focused production roles in the lower-skill bracket.[30] Feedback during industry consultations strongly reinforced the importance of higher-level skills and customer service and selling skills for businesses to differentiate capabilities in the marketplace and meet the needs of well-informed consumers.

29 http://www.idtechex.com/research/reports/wearable-technology-2016-2026-000483.asp

30 2017, Advanced Manufacturing Growth Centre, Submission to Innovation and Science Australia.

Online and Social Media Marketing

The populations in developing countries are growing at the same time as they are declining in developed countries. The growing middle class in these developing countries provides new markets accessible to Australian manufacturers with an effective online presence.

In the post-production phase of manufacturing, industry contributes value-adding services that support or complement products and foster long-term customer relationships. This shift to offering manufacturing 'as a service' involves focusing on listening to customer needs, potentially by selling a contemporary capability, process, component or solution rather than merely a finished item.[31] This trend is evident in the use of social media and mobile technologies where virtual reality experiences such as holograms showcase design items and offer customers unique and personalised experiences.

Social media is creating opportunities for local fashion designers. While labels were previously creating fashion to respond to retail demand, online retailing and social media have created opportunities to connect with niche markets.[32] The changes happening in the digital space are some of the greatest disruptions the fashion industry has seen.

With 30 billion connected devices on earth by 2020, the volume of data available will be enormous, allowing manufacturers to provide highly personal, flexible products and experiences that will be predictive rather than reactive and enable targeted after-sale service.[33] As a result, whether it is running a business or managing individual health, our work and personal lives will increasingly demand abilities to interact with data, see patterns in data, make data-based decisions, and use data to design for desired outcomes.[34] This data will enable informed predictions about future demand and impact associated design requirements.

Empowered Consumers

Many TCF manufacturers know that digitisation, digital transformation and Industry 4.0 is upon us and they need to adapt or risk obsolescence. Industry 4.0, which includes the Internet of Things (IoT), data science, mobility, and digital commerce and cloud deployment, threatens to disrupt established market relationships, introduce new competitive dimensions, and challenge existing business models to reach and service their customers.

There are examples of textile, clothing and footwear manufacturers moving from selling products to selling outcomes; the business provides the equipment or product, but still owns it, maintains and manages it, replacing or repairing as needed. Examples are evident in the clothing rental market and the laundry sector where linen is owned, rented and laundered by a large service provider. These opportunities increase the need for training staff in customer service, service provision, custody and management of the supply chain, ethical sourcing and property rights.

The implications for the industry are a need for both large production run skills and skilled workers for bespoke manufacturing requiring low volume production, e.g. specialised areas such as embroidery and accessories.

31 2017, Advanced Manufacturing Growth Centre, Submission to Innovation and Science Australia.

32 2017, Advanced Manufacturing Growth Centre, Submission to Innovation and Science Australia.

33 Epicor, 2016, The Factory of the Future, How disruptive technologies and megatrends will shape manufacturing.

34 Institute for the Future for the University of Phoenix Research Institute, Future Work Skills 2020

Legislation, Standards and Sustainability

Manufacturers are responsible for ensuring their products meet mandatory standards such as care labelling. Importers and retailers are all responsible for ensuring their products meet these standards, but in some cases lack awareness of these responsibilities.[35] Standards and licensing are not well understood, particularly by small start-up businesses.

The ethical product movement is driving changes in managing custody along the supply chain, identifying and eliminating human slavery, traceability of raw materials and textile recycling and trade waste. This also requires better understanding of sustainable manufacturing which includes knowledge and use of natural fibres and organic materials as well as ethical sourcing.

Industry feedback suggests that the range of employment and subcontracting arrangements is very broad, posing challenges for small business operators to clearly understand and manage their responsibilities. Labour law complexity and fluctuations in work often leave business owners reticent to make the commitment to employ, let alone invest in training.

For Learners and Training Package Development

The Textiles, Clothing and Footwear Training Package needs to continue to respond to TCF industry needs by offering flexibility. The current training package focuses on basic production of clothing and footwear which has largely been offshored and replaced by boutique businesses offering bespoke items. Demand for lower-level qualifications is expected to decline in favour of higher-level skills gained through higher-level qualifications and non-accredited 'just-in-time' or 'do-it-yourself' training.

Industry feedback suggests that business owners and workers are undertaking skills development when and how they need it on the job (just-in-time/do-it-yourself), rather than using traditional formal education or training pathways. Skill sets may be more highly valued if they can provide realistic workplace experiences during delivery.

Industry is looking for more training delivery options that recognise the nature of TCF workplaces and is increasingly disinterested in full qualifications. Examples include better utilisation of mobile options such as minimal disruption to the workplace and accessing training from equipment suppliers who are increasingly providing onsite training on their equipment as part of their customer service and use mobile devices like iPads.

More effective use of Recognition of Prior Learning (RPL) provides a means to value and retain the skills of experienced workers, and by upskilling experienced workers to become industry mentors, they in turn may assist to maintain hand-craft skills which industry feedback indicates are being lost. While the importance of new technology is critical, industry also expects graduates to have traditional skills and knowledge.

In some jurisdictions there are no RTOs offering training, and with the low numbers of RTOs with some qualifications on scope (see Tables 2 and 3 above), accessing quality training can be challenging and expensive. Training providers are finding some of the qualifications too big and costly to deliver and have limited access to trainers that meet the standards.

35 ACCC, 2011, Product Safety, Care labelling for clothing and textile products Supply Guide

Students are attracted to higher-level qualifications that are funded, but industry advice suggests that the work available does not currently require these skills, causing a mismatch between supply and demand. Industry is calling for qualifications, particularly those that are funded, to lead to realistic student expectations of job opportunities and to meet industry requirements.

RTOs offering training in the MST Textiles, Clothing and Footwear Training Package need to ensure they offer what industry seeks at an industry-acceptable standard, and that includes skills training in newer technologies such as CAD, digital measuring and 3D design. This ensures work readiness of new entrants and also builds stakeholder confidence in the training being offered. The 'tick and flick' approach used by some RTOs is no longer acceptable to industry who are prepared to look at alternative means of skilling their workforce.

Industry feedback indicates that learners attracted to the industry often lack sound STEM skills, which are required in the workplace across most occupations to allow graduates to be effective workplace contributors and successfully undertake further formal training. Industry consultations identified that some newer students do not seem to appreciate that they need sound STEM skills to successfully undertake higher-level qualifications.

Language, Literacy and Numaracy (LLN) skills are important for CALD workers undertaking formal training to skill them for the work available in the TCF Industry.

Cross-Industry Challenges and Opportunities

Synergies exist with other industry sectors such as specialised textile production, upholstery for cars, furniture, boats and caravans, shade cloth and canvas and pool-cover manufacturing. Identifying and aggregating common skills across different industry sectors could assist with skill development in thin markets and enhances workers' mobility during periods of structural adjustment.

Research into thin markets in Western Australia undertaken by the Food, Fibre and Timber Industries Training Council (WA) identified sewing as a cross-sector skill used by a diverse range of occupations within TCF and also across a number of other industries. The report proposed the establishment of an Industrial Sewing skill set to assist employers to upskill workers in key areas and also enable occupational mobility for individuals.[36]

The Textiles, Clothing and Footwear IRC also engaged with the Australian Industry and Skills Committee-commissioned Future Skills and Training Resource, and identified a number of key trends and considerations for training, which are provided in **Appendix C**.

36 Food, Fibre and Timber Industries Training Council (WA) Inc, Thin Markets - Improving workforce development opportunities in thin markets of the food, fibre and timber industries, July 2015

Employment and Skills Outlook

Employment Outlook

The Textiles, Clothing and Footwear Industry is characterised by offshoring of repetitive, production, high-volume work and subcontracting of low-volume, specialised work. Employment numbers for this industry are difficult to quantify, with sole traders working from home not readily visible.

Appendix D illustrates the following employment trends from census data 2006, 2011 and 2016 for the identified TCF occupations:[37]

- declining employment numbers in seven of the eight occupations
- Fashion, Industrial and Jewellery Designers showed consistent increases in employment numbers over the ten-year period
- Canvas and Leather Goods Makers, Clothing Trades Workers, Upholsterers, Sewing Machinists, Textile and Footwear Production Machine Operators and Other Factory Process Workers all showed decreases in the number of workers over the ten-year period
- Laundry Workers (General) employment decreased slightly over the ten-year period but was expected to grow by around 3% between 2017 and 2022
- the occupation with the highest skill level, Fashion, Industrial and Jewellery Designers, is also the occupation with the highest projected employment growth of 20% between 2017 and 2022.

Between 2011 and 2016, the proportion of females employed in the industry was relatively stable at around 57%.[38] In the 2016 Census, the proportion of females employed in some occupations including Fashion, Industrial and Jewellery Design, Clothing Trades Workers, Sewing Machinists and Laundry Workers (General) was over 60% but continues to be disproportionally low (under 10%) for the more traditional TCF occupations including Canvas and Leather Goods Makers, Upholsters and Textile and Footwear Production Machine Operators.[39]

The TCF Industry consultations reported significant challenges in attracting younger workers and retaining the skills of an ageing workforce which provide a range of skills, e.g. for specialised stages of the production process such as zips and button holes. **Appendix E** provides census data since 2006 that supports this commentary for the identified occupations. Between 2006 and 2016, the oldest age group for each occupation has increased with smaller numbers employed from the 29-and-under age groups overall.

37 Source: ABS Census of Population and Housing; 2006, 2011 and 2016

38 ibid.

39 ibid.

Replacement demand is high for occupations with a relatively older workforce such as Upholsterers, but this can have training implications with less experienced workers available to train and supervise apprentices and the training lag time not always factored in to avoid future skills shortages.[40] With increased competition from emerging markets and an ageing workforce, the industry needs to consider how to attract new entrants to the industry.

Workforce Supply Challenges

Changing Nature of Work and Workplaces

The ageing workforce, less people entering manufacturing in Australia, reduced enrolments in manufacturing qualifications and recent changes to visa arrangements are all contributing to challenges for the TCF workforce and employers. When these challenges are combined with offshoring of work there is a reduction in the opportunity for skill development, leaving employers struggling to fill positions in general sewing, furnishing and specialised textiles. Often this work is undertaken in home-based businesses with little capacity to train others in these traditional skills, including hand skills.

The ageing TCF small business owner, typically with limited social media skills, is facing retirement and generally has no succession plan in place. Consequently, many businesses are closing. This is a loss to the industry and the workforce as crafts skills are not being passed on. New, often younger, business owners may have technical competence and social media skills but are also perceived to lack business skills.

Manufacturing has received negative press for some years, giving the impression there is no future in manufacturing work rather than promoting the new careers and new job opportunities available. Industry consultations identified a need for enhanced career advice to reflect the current and future employment opportunities available. They also identified that the Companion Volume of the training package should provide more detail on pathways within this industry and across sectors.

Work in the TCF industry is relatively fragmented, with increasing examples being provided of start-up businesses looking to project-manage whole supply chains through the subcontracting of specialised service providers. In some cases, these start-ups establish their own business using technical skills gained through formal training, but many also need access to 'add-on' business and technology skills in areas like networking and relationship building to be successful.

This new workplace model no longer relies on the traditional employer-employee relationship and raises questions about the traditional employer's responsibility for training. It also makes it less clear when and how skill development will occur if subcontracting rather than direct employment becomes the preferred operational model.

Formal qualifications and training are not always highly valued in terms of their return on investment in this industry. The result is that skills like sewing, cutting and pattern making are dying out. Industry consultations advised that many new industry entrants are self-taught and undertake sporadic skills development through a do-it-yourself approach and accessing small 'chunks' of training as needed using whatever means they can access as and when they need it, via online workshops and YouTube.

40 Shah, C and Dixon, J 2018, Future job openings for new entrants by industry and occupation, NCVER, Adelaide.

Industry feedback indicates that the development of training products is slow to respond to the range of workplaces and their changing needs. In addition, some seeking factory work do not always have a particular career in mind; they just want a job, while those undertaking formal study in Fashion Design may not be keen on the jobs that are on offer in the industry.

The challenge in reinvigorating apprenticeships for Industry 4.0 is magnified by the fact that increasing numbers of young people are going on to university study after school rather than into apprenticeships. More young apprentices now come from low socioeconomic backgrounds and with lower academic ability, including literacy and numeracy deficits.[41] This means policy needs to provide resources and support to help learners remain in training and complete their course or apprenticeship, and for employers to support them.

Pockets of Growth

Commercial laundries are growing through the use of automation, which reduces the number of employees required with low skill levels but increases the need for higher-level skills in production line contract management operations and management, fault finding, problem solving and machine maintenance.

Skills Outlook

Four of the five top-ranked generic workforce skills were the same for the aggregated Manufacturing IRCs and the Textile Clothing and Footwear IRC as follows:

- Technology use and application
- Design mindset/Thinking critically/Systems thinking/Solving problems
- Communication/Collaboration including virtual collaboration/Social intelligence
- Learning agility/Information literacy/Intellectual autonomy and self-management.

On reflecting on their rankings, the TCF IRC acknowledged the importance of Environmental and Sustainability skills but felt that the other more highly ranked skills were required to run a business and asserted that industry assumed that new workers already had the necessary STEM and LLN skills before commencing work.

41 Karmel, T, Roberts, D and Lim, P 2014, The impact of increasing university participation on the pool of apprentices, NCVER, Adelaide, https://www.ncver.edu.au/publications/publications/all-publications/the-impact-of-increasing-university-participation-on-the-pool-of-apprentices

Key Generic Workforce Skills

	Combined Manufacturing IRCs	Textiles, Clothing and Footwear IRC
1	Design mindset/Thinking critically/Systems thinking/ Solving problems skills	Technology use and application skills
2	Technology use and application skills	Design mindset/Thinking critically/Systems thinking/ Solving problems skills
3	Learning agility/Information literacy/Intellectual autonomy and self-management skills	Communication/Collaboration including virtual collaboration/Social intelligence skills
4	Communication/Collaboration including virtual collaboration/Social intelligence skills	Learning agility/Information literacy/Intellectual autonomy and self-management skills
5	Science, Technology, Engineering and Mathematics (STEM) skills	Customer service/Marketing skills
6	Language, Literacy and Numeracy (LLN) skills	Entrepreneurial skills
7	Data analysis skills	Science, Technology, Engineering and Mathematics (STEM) skills
8	Managerial/Leadership skills	Language, Literacy and Numeracy (LLN) skills
9	Customer service/Marketing skills	Data analysis skills
10	Environmental and Sustainability skills	Managerial/Leadership skills
11	Entrepreneurial skills	Financial skills
12	Financial skills	Environmental and Sustainability skills

Priority Areas for Training Package Development

Rank	Skill	How identified
1	Skills to address hygiene and infection control in laundry and dry cleaning	Industry Consultation
2	Clothing and textile production skills	Industry Consultation
3	Skills impact of new technologies and materials	Industry Consultation
4	Production skills for fashion designers	Industry Consultation
5	STEM skills	Industry Consultation

The industry survey indicated areas of enhancement for the MST Textiles, Clothing and Footwear Training Package to better meet industry needs and ensure an industry standard of quality can be delivered. New training package products and revisions to existing training package products were identified to address the following areas.

Laundry and Dry Cleaning

- hygiene, infection control and safety in laundry operations, noting that General Services Officers working in aged care also work in on-site laundries and there is an opportunity for a cross-sectoral project with hospital support workers
- laundry operations including Continuous Batch Washing (CBW), supervision, workplace diversity, ironers and ironer safety, washing concepts and understanding standards
- skill sets including linen technical skills to include use of chemicals, washing types, linen types, stain removal and wash cycles
- training for on-premise laundries to include laundering of personal items, hygiene and infection control
- review of training package rules to provide more flexibility to tailor to the modern workplace.

Fashion Design and Technology

- review of training packaging rules to better align with other comparable qualifications
- streamlining of training products
- review of some units of competency to simplify Performance Criteria, Performance and Knowledge Evidence
- development of skill sets on buying, supply chain management, merchandising, product range design, tech packs, technical drawings, CAD, data analytics
- bespoke manufacturing.

Clothing and Textile Production

- improve flexibility of packing rules and review pre-requisites units
- skill sets on footwear trade-specific hand skills, sewing, overlocking, button hole, pattern making (both electronic and manual) and grading, sizing, clothing alterations
- inclusion of units on CAD software design.

Footwear and Leather Production

- broadening the name and focus of the qualifications
- developing appropriate Recognition of Prior Learning pathways that recognise the skills learnt on the job
- creating pathways.

Key Drivers for Change and Proposed Responses

Embracing Change

Attracting people to the industry remains a problem, with unskilled casual staff available but skilled workers becoming increasingly rare. While manufacturing remains in transition, the public perception is of an industry with no future, and a university pathway is increasingly seen as providing a more secure future, leading to fewer young people applying for work in the industry. Pay rates in the TCF Industry, which make Australia globally uncompetitive on production work, are also placing financial pressures on bespoke manufacturers competing in an industry associated with lower wage rates.

The TCF Industry has and is experiencing significant change in the way it does business and meets customer needs. Global competition and a global marketplace provide both significant opportunities and challenges which the industry is responding to in various ways. Traditional skills remain important but need to work alongside new technologies, workplace structures and attitudes to work. Analysis of workplace requirements and job analysis is required to ensure the MST Textiles, Clothing and Footwear Training Package is relevant to today's business needs and those of the future to ensure the industry can meet consumer needs and remain competitive.

The proposed responses are predicated on first looking at the 'skills bank' and other training packages to determine the application of any identified units of competency to the TCF Industry. New units and skill sets will be developed only where required.

Priority Skills	Key Driver for Change	Proposed Response
Industry Specific		
Fashion design	Skills mismatch	Identification of industry skill requirements and how best to introduce them into the qualifications
Alterations of mass-produced garments and textiles	Consumer buying trends with online retailing	Identification of industry skill requirements and how best to introduce them into the qualifications
Laundry and dry cleaning	Growth in demand from health, hospitality and accommodation sustainability and regulation	Revision of the qualifications to be more flexible and address hygiene and infection control associated with growing health sector demand
Sustainable and ethical buying, natural fibres and organic materials	Sustainability	Inclusion and/or development of new units

Priority Skills	Key Driver for Change	Proposed Response
Technology		
CAD, laser cutting, 3D prototyping and performance textiles	Digitisation and Automation	Identification of industry skill requirements and how best to introduce them into the qualifications
Radio Frequency Identificaiton (RFID)	Automation	Identification of industry skill requirements and how best to introduce them into the qualifications
STEM skills	Cross-disciplinary nature of work	Imbedding of STEM skills into the training products
Business		
Networking and relationship building	Offshoring	Inclusion and/or development of new units
Financial skills	Changing workplace pressures Learners desire to start their own business	Flexible packaging rules to accommodate business skills

Training Product Review – Current Activities

2016-17 Activities

There was no Activity Order for this training package during 2016-17. The IRC requested no package development work be undertaken on this training package, and it be 'bedded down' given the transition from the old LMT Training Package to the current MST Textiles, Clothing and Footwear Training Package which was endorsed in July 2016. The new package includes a number of qualification amalgamations and cancellations.

2017-18 Activities

Late in 2017, the IRC determined there was a pressing need to address the critical skill of 'buying'. Research suggested it was being inadequately covered in the merged qualifications for the Diploma and Advanced Diploma of Applied Fashion Design and Merchandising resulting in graduates not being suitably 'job ready' to undertake this requirement when starting employment in the industry.

Case for Change – 'Buying'

This Case for Change was approved by AISC in February 2018 and involves looking at the key area of Buying/ Merchandising to strengthen this essential job skill requirement for graduates in the Diploma and Advanced Diploma in Applied Fashion Design and Merchandising. The work aims to align the qualifications with job roles and provide more focus for students wishing to pursue a career in buying.

Proposed changes include:

- A review of existing buying units for relevance/redevelopment
- A new buying-specific unit may be created
- Development of a buying-specific skill set that could incorporate practical TCF-recognised best-practice buying methodology including costing, ethical sourcing, managing production remotely, spreadsheet and analytical skills including return on investment analysis, negotiating, replenishment, logistics, and developing buying plans.

A Training and Advisory Committee (TAC) will be formed and further consultation is planned with stakeholders including speciality buyers, industry and training providers for additional input and perspective. The project is expected to be considered by the AISC early in 2019.

Transition Scope of Work

There have been eleven LMT qualifications identified as 'current' on the training.gov.au website that were not transitioned to the new MST Textiles, Clothing and Footwear Training Package.

Four LMT07 qualifications were identified as needing to be transitioned from the Textiles, Clothing and Footwear Training Package to the Manufacturing and Engineering (MEM) Training Package:

- LMT20407 Certificate II in Cotton Ginning
- LMT30307 Certificate III in Cotton Ginning
- LMT40207 Certificate IV in Cotton Ginning
- LMT31909 Certificate III in Engineering – TCF Mechanic.

Three LMT07 qualifications identified in the Companion Volume as not being transitioned to the MST Textiles, Clothing and Footwear Training Package are expected to be deleted from the training.gov.au website.

- LMT11107 Certificate I in Textiles, Clothing and Footwear
  This qualification has been deemed as having 'No Workplace Outcomes' in the current Companion Volume
- LMT32011 Certificate III in Digitising and Computerised Embroidery
  This qualification has been incorporated into MST30816 Certificate III in Applied Fashion Design and Technology, and was not transitioned
- LMT50407 Diploma of Textile Technology and Production Management
  This qualification is now equivalent to MST50216 Diploma in Textile Design and Development, and did not require transitioning.

The IRC have requested that further consultation be undertaken for the remaining four qualifications to determine industry need:

- LMT40810 Certificate IV in Laundry Operations and Supervision
- LMT40907 Certificate IV in Supply and Fitting or Pre-manufactured Medical Grade Footwear
- LMT50207 Diploma in Medical Grade Footwear
- LMT60207 Advanced Diploma of Medical Grade Footwear.

AISC Cross-Sector Projects

The AISC identified a number of emerging cross-sectoral themes in previous IRC Skills Forecasts. The AISC sought to strategically address these common skills issues and commissioned nine cross-sector projects. The aim of the projects is to address changing skills needs across industries in a coordinated and efficient way and, where opportunities exist, to create flexible and transferable training package components that will benefit industry, learners and the broader VET sector.

There are four cross-sector projects that will potentially directly impact upon the MST Textiles, Clothing and Footwear Training Package.

1 The **Digital Skills** Cross-Sector Project, initially focused on the need for coding skills in manufacturing and related training packages, was subsequently expanded to focus on a broader set of skills related to coding and programming, CAD/CAM/CAE, and additive manufacturing/3D printing, as well as the digital analytical/diagnostic skills needed to analyse and respond to data provided by machines in the workplace. Outcomes of the project may result in recommendations for updated content for up to eleven units of competency in the MST Textiles, Clothing and Footwear Training Package.

2 The **Environmental Sustainability Skills** Cross-Sector Project focused on identifying environmental sustainability skills that are shared by multiple industry sectors and recommend training package developments and modifications that will enable the use of training products across multiple industries, thus reducing duplication and enhancing skill transferability. Outcomes of the project may result in recommendations for at least two units of competency from the MST Textiles, Clothing and Footwear Training Package to be reviewed, with potential for replacement by a cross-industry unit.

3 The **Supply Chain Skills** Cross-Sector Project investigated cross-sector skills to support industries seeking to increase efficiencies and meet consumer demands to become more competitive across supply chains. Outcomes of the project may result in recommendations for at least three units of competency from the MST Textiles, Clothing and Footwear Training Package to be reviewed or redeveloped to make them more suitable for cross-industry use and be included in cross-industry skill sets.

4 The **Teamwork and Communication** Cross-Sector Project is proposing to develop five new units of competency that might be able to be used across all training packages and could potentially be used to replace three units of competency from the MST Textiles, Clothing and Footwear Training Package.

A fifth cross-sector project that may potentially impact upon the MST Textiles, Clothing and Footwear Training Package is **Consumer Engagement through Social and Online Media**. This project reviewed key skills for businesses to remain competitive in a global market including cultural awareness, customer service, marketing, communication and social media skills. The case for change proposes eight new units and four skill sets in the areas of ethical practices, privacy regulations and protocols and awareness of online/social media users.

Training Product Review – Priorities 2018-2022

Following consideration and analysis of the industry challenges and opportunities, current and emerging skills needs and the key drivers for change, the Textiles, Clothing and Footwear IRC has identified a number of areas for training product development.

These training priorities are outlined in the IRC Skills Forecast and Proposed Schedule Work 2018-19 to 2021-22 table, which lists the priorities for the next four years. This table also provides a rationale, proposed scope and timeframes for these activities.

Items Identified as Time Critical and to be Considered by the AISC as Part of the 2018 Industry Skills Forecast and Proposed Schedule of Work

The IRC identified the following training priority as critical and proposed for inclusion as a priority for the 2018-2019 schedule of work:

- **Laundry and dry cleaning**

A Case for Change has been prepared and included as part of this document. The Case for Change provides further information on the industry imperatives, consultation plan and proposed scope of the project.

Items Identified as Important and to be Included in the Priorities for 2018-19

The item identified as important and proposed for inclusion as a priority for the 2018-2019 schedule of work is:

- **Clothing and Textile production skill sets**

A separate Case for Change will be prepared and submitted to the AISC for consideration.

Items Identified as Priorities Over the Next Three Years

The IRC identified the following training priorities to be considered over the next three years:

- **New technologies and materials**
- **Fashion Design**
- **STEM skills**
- **Leather Production, Footwear and Millinery.**

Proposed Schedule of Work 2018-19 to 2021-22

Textiles, Clothing and Footwear Industry Reference Committee (IRC)

MST Textiles, Clothing and Footwear Training Package

Contact details: Leon Drury, IRC Chair

Date submitted to Department of Education and Training: May 2018

Year	Items to be included in National Schedule of work
2018-19	Laundry and Dry Cleaning

Review the laundry and dry cleaning qualifications.

Rationale

As a growing sector in the Textiles, Clothing and Footwear Industry, the current qualifications and lack of skill sets are limiting the sector's ability to skill its workforce and maximise the opportunities provided by automation and expanding markets in aged care, health and accommodation.

New markets and business operations are driving the need to address hygiene and infection control (which would address the aged care General Service Officer skill need).

Environmental awareness and increasing operational costs are driving the need for businesses to reduce waste, improve safety practices, utilise new (including alternate/green) solvents, improve energy efficiencies and enhance the customer experience.

Review of the qualifications will include the packaging rules to increase flexibility and ensure customer service skills are accessible from the Business Service Training Package.

Environmental Sustainability Skills cross-sector project outcomes may impact this work.

See Laundry and Dry Cleaning and Training Delivery in the Sector Overview section.

Training products impacted:

- MST20416 Certificate II in Laundry Operations
- MST30616 Certificate III in Laundry Operations
- MST30716 Certificate III in Dry Cleaning Operations

This project was identified as time-critical and that training package development work be approved as part of this submission.

Further information on the industry imperatives, consultation plan and proposed scope of the project is provided in the Case for Change following the proposed schedule of work.

Year	Items to be included in National Schedule of work

2018-19

Clothing and textile production skill sets

Development of Skills Sets in Garment Making; Tailoring; Alterations; Advanced Clothing Production; Repair and Mending; Custom Made and Alterations; Sample Machining; Sizing; Pattern Making and Grading; Sizing, Industrial Sewing, Standards and Compliance; Ethical Supply Chain Management; Ethical Sourcing; Commercial Led Design; Managing Government Procurement; Intellectual Property Rights and Copyright.

Rationale

Skilled workers are required to meet the industry needs for craft skills for bespoke one-off garments in tailoring or formal couture gowns or sample machining, small-run manufacturing (50 garments) and large-run production skills. Offshoring and ageing workforce and low enrolments in formal training have led to a lack of available skilled workers for the TCF industry. Skill sets offer a means of addressing industry skills shortages and upskilling the existing workforce. Industrial sewing skills are also in demand across a number of related industry sectors.

See Clothing Production, Legislation, Standards and Sustainability and Cross-Industry Challenges and Opportunities in the Sector Overview section.

Training products impacted:

- MST30116 Certificate III in Clothing and Textile Production
- MST30216 Certificate III in Manufactured Textile Product

The following training products also potentially impacted:

- MST20116 Certificate II in TCF Support
- MST20216 Certificate II in TCF Production Operations
- MST20516 Certificate II in TCF Services and Repair

This work may be impacted by the Supply Chain cross-sector project.

Year	Items to be included in National Schedule of work
2019-20	**New technologies and materials** Investigate the skills impact of new technologies and materials that are coming into more widespread use and, where required, develop new units to address the industry skill requirements in CAD, laser cutting, 3D Prototyping, and performance textiles. Digital skills in design and pattern making and skills in mobile technologies such as social media and online retailing are also critical. **Rationale** Existing workers in these emerging technologies and materials need to develop post-trade skill sets to upskill and reskill and maintain their value in the workplace. See Digitisation/Online and Social Media Marketing and Synthetic and Natural Textile Manufacturing in the Sector Overview section. **Training products impacted:** • MST30116 Certificate III in Clothing and Textile Production • MST30216 Certificate III in Manufactured Textile Products • MST40116 Certificate IV in Textile Design, Development and Production • MST40216 Certificate IV in Clothing Production This work may be impacted by the Digital Skills and the Consumer Engagement through Social and Online Media cross-sector projects.

Year	Items to be included in National Schedule of work

2020-21

Fashion Design

Review the Fashion Design and Technology and Merchandising packaging rules and develop skill sets.

Rationale

The Fashion Design and Technology and Fashion Design and Merchandising qualifications are the most popular in the training package but focus on skills required for a fashion designer to set up their own label in lieu of fashion design in a production setting.

More and more, the sector is seeking workers with high-level qualifications to compete in an international arena, with job outcomes for those with lower-level qualifications unclear.

The industry survey provided detailed feedback on improvements required to these qualifications to better meet industry requirements and opportunities including training package rules and commentary regarding streamlining and simplifying language.

Development of skill sets on buying, supply chain management, merchandising, product range design, tech packs, and technical drawings were described as being required during the consultations.

See Appendix B: Industry Survey Analysis; Fashion and Qualification Uptake in the Sector Overview section.

Training products impacted:

- MST20616 Certificate II in Applied Fashion Design and Technology
- MST30816 Certificate III in Applied Fashion Design and Technology
- MST40516 Certificate IV in Applied Fashion Design and Merchandising
- MST50116 Diploma of Applied Fashion Design and Merchandising
- MS60216 Advanced Diploma in Applied Fashion Design and Merchandising

Year	Items to be included in National Schedule of work

2020-21

Leather Production, Footwear and Millinery

Investigate the contemporary workplace skill requirements for the highly specialised sectors of Leather Production, Footwear and Millinery.

Rationale

Investigate the contemporary workplace skill requirements for the highly specialised sectors of Leather Production, Footwear, and Millinery.

The TCF Industry in Australia continues to experience significant change, with some sectors experiencing offshoring as well as the development of specialist onshore operations. Changes in workplace operations involved in leather production, footwear and millinery impact on their skill requirements and need to be examined to determine changes required in the current qualifications and units of competency to better meet the skill needs.

Qualifications in Leather Production, Footwear and Millinery have had low enrolments for some time. These low enrolments need to be investigated to better understand the contributing factors, including how well they meet industry requirements.

See Leather and Footwear Production and Qualification Uptake in the Sector Overview section.

Training products impacted:

- MST20316 Certificate II in Leather Production
- MST30516 Certificate III in Leather Production
- MST30316 Certificate III in Millinery
- MST40416 Certificate IV in Millinery
- MST30416 Certificate III in Footwear
- MST40316 Certificate IV in Custom Made Footwear

Year	Items to be included in National Schedule of work

2020-21

Soft Skills and STEM skills

Soft skills and STEM skills including problem-solving, creative thinking and design, and team work skills have been identified, during consultations, as being highly regarded by industry.

Rationale

The Food, Fibre and Timber Industries Training Council conducted STEM skills research and these came up as crucial skills required by the industry. This was further supported during industry consultations to inform this Skills Forecast.

The key challenge is to imbed them into existing Units of Competency and ensure the packaging rules allow for importing.

Existing MSTS problem solving units, and the Team Work Skills Cross-sector project outcomes may address this skill need.

See Pockets of Growth and Technology in the Employment and Skills Outlook section.

Training products impacted:

- MST30716 Certificate III in Dry Cleaning Operations
- MST30116 Certificate III in Clothing and Textile Production
- MST30816 Certificate III in Applied Fashion Design and Technology
- MST30516 Certificate III in Leather Production
- MST30616 Certificate III in Laundry Operations
- MST30216 Certificate III in Manufactured Textile Products
- MST30416 Certificate III in Footwear
- MST30316 Certificate III in Millinery
- MST40116 Certificate IV in Textile Design, Development and Production
- MST40416 Certificate IV in Millinery
- MST40316 Certificate IV in Custom-Made Footwear
- MST40516 Certificate IV in Applied Fashion Design and Merchandising
- MST40216 Certificate IV in Clothing Production

2018-19 Case for Change

Textiles, Clothing and Footwear Industry Reference Committee (IRC)

MST Textiles, Clothing and Footwear Training Package

Contact details: Leon Drury, IRC Chair

Date submitted to Department of Education and Training: May 2018

Laundry and Dry Cleaning

Description:	Research and analysis of the Laundry and Dry Cleaning sector skill requirements to ensure the laundry and dry cleaning training products meet current and future industry skill needs.
Rationale:	The laundry sector is expected to grow over the next five years, underpinned by growth in nursing homes and retirement villages and tourism accommodation. The Laundry industry is expressing concerns around the operation of laundries in the health sector, especially in relation to infection control and particularly the receiving and safe handling of soiled linen. Specialist laundries are required to comply with the Laundry Standard AS/NZS 4146 2000, but there is a lack of confidence in staff being adequately trained. Skills for safe handling of soiled linen, validation of disinfection, dryer safety, etc. are required by both commercial laundry operators and on-premise laundries. Aged Care providers employ staff to work in the kitchen, in cleaning and in the laundry. The industry's concern is the lack of specific laundry training for compliance with the Laundry Standard AS/NZS 4146 2000. The Laundry Association of Australia (LAA) has raised concerns regarding the deaths of elderly residents in one centre in Victoria due to gastroenteritis and the possible link to the lack of infection control measures for staff working across three different environments in aged care facilities. This may be due to a lack of implementation of and compliance with the Laundry Standards and Industry Codes of Practice. The NDIS and 'ageing in place' policies may also see an increase in demand for commercial linen and laundry services in the home. The current qualifications and units use dated language that does not reflect current industry practice, making it less attractive to an industry that uses large numbers of workers from Culturally and Linguistically Diverse Backgrounds. A recent survey of RTOs indicates the laundry qualifications need more flexible packaging rules to recognise different workplace requirements.

Laundry and Dry Cleaning

Rationale:

Laundry and dry cleaning operations are becoming more automated, with skills needed in problem solving and fault finding increasing in importance. Technology is being used to provide data and enhance operations, for example, with the use of Programmable Logic Controllers (PLCs), productivity data capture devices, and Radio-frequency identification (RFID) bar coding to track individual items to allow better monitoring in the event of infection and cross-contamination. The importance of computer literacy and data analysis in terms of individual performance and operational efficiency is becoming more commonplace. Despite automation, industry advice is that skilled workers are in demand.

Dry cleaners and laundries are needing to demonstrate greener and more sustainable operations. Dry cleaners are also offering personalised customer service, advice and value-add services like mending and alterations.

The risks of not proceeding with this project include:

- risk of cross-infection to those most vulnerable in our community through inadequate training requirements
- continuing employer dissatisfaction with the skills of students following completion of an accredited qualification
- perpetuation of the industry's lack of confidence in the national training system to meet their needs
- fewer skilled workers being available for laundry and dry cleaning operations
- the current lack of skill sets limiting opportunities for existing skilled workers to upskill in new operations and standards.

Laundry and Dry Cleaning

Ministers' Priorities Addressed:

The case for change addresses the following Ministers' Priorities:

Obsolete qualifications removed from the system

The current laundry and dry cleaning qualifications do not meet industry requirements and have a history of low enrolments. This review will determine what changes are required to better meet industry requirements which may include merging and/or deleting qualifications.

More information about industry's expectations of training delivery is available to training providers to improve their delivery and to consumers to enable more informed choices.

Updates to the Companion Volume after this work will provide training providers with clarity on vocational outcomes and pathways and support stronger engagement and discussions with industry to better understand and promote vocational pathways.

The qualifications and units will be developed and reviewed, incorporating contemporary industry language and practice to ensure they are meaningful to the student, employers and the RTO.

The training system better supports individuals to move more easily between related occupations

The linkages between laundry and dry cleaning are increasing and evident with significant overlaps in units. More flexible packaging rules and formal integration of foundation skills will allow customisation of delivery to meet the learner and industry requirements. The Companion Volume updates will show linkages with related occupations and career pathways.

Improved efficiency of the training system through units that can be owned and used by multiple industry sectors

Units from other training packages, including Workplace Health and Safety at supervisory level, will be reviewed for relevance to this industry and used wherever possible to improve efficiency of the training system. Cross-sectoral project outputs will be considered and, where available, incorporated into this work. Skills IQ Projects in Health and Community Services, including aged care and disability, will be monitored for the relevance of their unit development in new technologies.

Foster greater recognition of skill sets

Skill sets will be considered as part of this work as they may provide a means of upskilling trade qualified workers and meeting specialist requirements, including on-premise laundries.

Laundry and Dry Cleaning

Consultation Plan:

IBSA Manufacturing Training Development Projects follow the Training Package Development and Endorsement Process Policy and use a five-phase methodology. The IBSA Textiles, Clothing and Footwear Industry Manager will coordinate the project in consultation with the IRC.

Phase 1 – Initial research and analysis

Establishment of a Technical Advisory Committee (TAC) to validate the project scope and contribute to the investigation of the industry to determine industry needs and undertake a job-role functional analysis. The IRC will appoint the Technical Advisory Committee to inform this work that will have current skills and knowledge across a broad range of industry job roles.

Proposed membership will include representatives from commercial laundry operators, on-premise laundry operators, dry cleaning operators and people with specialist knowledge of codes of practice and relevant Australian standards, for example:

- AS/NZS 4146 2000 Laundry Practice
- Aged Care Standards
- Healthcare Standards

Phase 2 – Draft 1 and public consultation

Develop first draft of training package components for feedback from the TAC and then the broader textiles, clothing and footwear industry and RTOs.

Phase 3 – Draft 2 and public consultation

Respond to feedback and develop second draft of training package components. Feedback to be sought from the broader textiles, clothing and footwear industry and RTOs.

Phase 4 – Approval process

Adjust training package components in response to further feedback and seek approval from respective committees, namely the TAC and IRC, and endorsement from state training authorities.

Phase 5 – Submission to Department

Submit to the Department of Education and Training for AISC approval.

Consultation Plan

IBSA will create a project web page to provide project updates, gather feedback from stakeholders and validate training package components.

Consultations are proposed with:

- employers such as large laundries, on-premise laundries and dry cleaners to identify the industry and job requirements, and trends and work opportunities
- relevant associations and industry training boards
- RTOs with these qualifications on scope and recent or current students, if accessible, to gain feedback on the actual qualifications and employment outcomes
- Skills IQ regarding skill needs of workers involved in healthcare handling soiled linen and clothing
- State Training Authorities to ensure all jurisdictions are engaged.

Laundry and Dry Cleaning

Scope of Project

Timing	**Estimated Project Duration:** 15 months **Anticipated Start Date:** September 2018 **Anticipated Completion Date:** Case for Endorsement to be submitted to the Department November 2019
Training Package	**Training Package to be developed/revised:** MST Textiles, Clothing and Footwear Training Package
Qualifications	A total of **4 qualifications t**o be developed/revised as part of this project. **4 existing** qualifications to be revised: • MST20416 Certificate II in Laundry Operations • MST30616 Certificate III in Laundry Operations • MST30716 Certificate III in Dry Cleaning Operations • LMT40810 Certificate IV in Laundry Operations and Supervision.
Skill Sets	There are currently no skill sets associated with these qualifications. **2 new skill sets** will be identified in consultation with the stakeholders. It is envisaged these will address: • Hygiene and Infection Control • Safe handling and disposal of solvents, textiles and waste.

Laundry and Dry Cleaning

Units of Competency

A total of **108 units of competency** to be developed/revised as part of this project.

6 new units of competency will be identified during the development. It is envisaged these will address:

- Safe handling and disposal of solvents in a laundry operation
- Safe handling and disposal of textiles
- Safe handling and disposal of trade waste
- Ironers and ironer safety
- Radio-frequency identification (RFID)
- Standards, compliance and codes of practice.

49 existing native units of competency to be revised:

- MSTCL2001 Use a sewing machine
- MSTCL2002 Provide hand sewing and finishing support
- MSTCL2004 Sew components
- MSTCL2006 Press work
- MSTCL3003 Perform garment repairs and alterations
- MSTCL3004 Press whole garments
- MSTDC2001 Provide customer service in a dry cleaning or laundry enterprise
- MSTDC2002 Conduct safe handling of dry cleaning chemicals and solvents
- MSTDC2003 Identify pre- and post-spotting requirements
- MSTDC2004 Operate dry cleaning machines
- MSTDC2005 Operate wet cleaning machines
- MSTDC2006 Operate finishing equipment
- MSTDC2007 Receive and sort articles for cleaning
- MSTDC2008 Carry out final inspection of articles
- MSTDC2009 Identify fabric and garment cleaning requirements
- MSTDC3001 Perform spotting function in dry cleaning operations
- MSTDC3002 Dry clean garments with special treatment requirements
- MSTGN2001 Use steaming and pressing equipment in TCF production
- MSTGN2002 Package and handle TCF items for storage or despatch
- MSTGN2003 Work in the TCF industry
- MSTGN2004 Work in a team environment
- MSTGN2006 Perform test or inspection to check product quality
- MSTGN2007 Select, transfer and remove materials and products
- MSTGN2008 Coordinate work of team or section

Laundry and Dry Cleaning

- MSTGN2009 Operate computing technology in a TCF workplace
- MSTGN2010 Perform tasks to support production
- MSTGN2011 Identify fibres, fabrics and textiles used in the TCF industry
- MSTGN2012 Work safely with chemicals in TCF operations
- MSTGN3001 Control production in a section of a TCF enterprise
- MSTGN3002 Organise and plan own work to achieve planned outcomes
- MSTGN3004 Supervise operations in a textiles, clothing and footwear enterprise
- MSTGN3005 Plan tasks to assist production operations
- MSTGN3007 Monitor and operate trade waste process
- MSTGN4001 Coordinate or set-up machines for product change
- MSTGN4011 Coordinate the quality systems and procedures
- MSTGN5001 Participate in production planning processes
- MSTLA2001 Apply infection control policies and procedures in laundry operations
- MSTLA2002 Operate washing machines
- MSTLA2003 Control washing extractor operation
- MSTLA2004 Perform linen rewash
- MSTLA2005 Operate hydro extractor
- MSTLA2006 Perform conditioning and drying processes
- MSTLA2007 Finish products for despatch
- MSTLA2008 Repair damaged laundry items
- MSTLA2009 Inspect, fold and pack theatre linen
- MSTLA2010 Prepare products for storage or despatch
- MSTLA3001 Perform advanced laundry operations
- MSTLA3002 Determine linen rental requirements
- MSTTX3012 Identify and deal with mechanical and low voltage electrical faults in textile machinery.

53 existing units of competency from other training packages to be reviewed for relevance:

- BSBADM409A Coordinate business resources
- BSBCUS401B Coordinate implementation of customer service strategies
- BSBINN301A Promote innovation in a team environment
- BSBLED401A Develop teams and individuals
- BSBMGT402A Implement operational plan
- BSBMGT403A Implement continuous improvement
- BSBWOR402A Promote team effectiveness
- MEM07033B Operate and monitor basic boiler
- MEM07034A Operate and monitor intermediate class boiler
- MSACMT270A Use sustainable energy practices
- MSACMT271A Use sustainable environmental practices
- MSAENV472B Implement and monitor environmentally sustainable work practices
- MSMBLIC001 Licence to operate a standard boiler
- MSMENV272 Participate in environmentally sustainable work practices
- MSMOPS101 Make measurements
- MSMSUP102 Communicate in the workplace
- MSMSUP106 Work in a team
- MSMSUP382 Provide coaching/mentoring in the workplace
- MSMWHS200 Work safely
- MSS402001A Apply competitive systems and practices
- MSS402002A Sustain process improvements
- MSS402010A Manage the impact of change on own work
- MSS402020A Apply quick changeover procedures
- MSS402021A Apply Just in Time procedures
- MSS402030A Apply cost factors to work practices
- MSS402031A Interpret product costs in terms of customer requirements
- MSS402040A Apply 5S procedures
- MSS402050A Monitor process capability
- MSS402051 Apply quality standards
- MSS402060A Use planning software systems in operations
- MSS402061A Use SCADA systems in operations
- MSS402080A Undertake root cause analysis

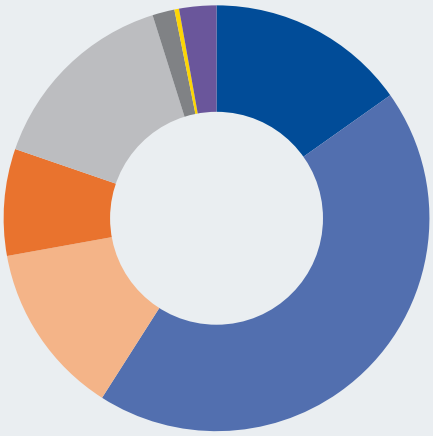
Laundry and Dry Cleaning

- MSS402081A Contribute to the application of a proactive maintenance strategy
- MSS403001A Implement competitive systems and practices
- MSS403002A Ensure process improvements are sustained
- MSS403010A Facilitate change in an organisation implementing competitive systems and practices
- MSS403021A Facilitate a Just in Time system
- MSS403030A Improve cost factors in work practices
- MSS403032A Analyse manual handling processes
- MSS403040A Facilitate and improve implementation of 5S
- MSS403051A Mistake proof an operational process
- MSS404050A Undertake process capability improvements
- MSS404052A Apply statistics to operational processes
- MSS404060A Facilitate the use of planning software systems in a work area or team
- MSS404061A Facilitate the use of SCADA systems in a team or work area
- MSS404081A Undertake proactive maintenance analyses
- MSS404082A Assist in implementing a proactive maintenance strategy
- PMBWASTE302 Coordinate waste disposal
- TAEASS401B Plan assessment activities and processes
- TAEASS402B Assess competence
- TAEASS403B Participate in assessment validation
- TAEDEL401A Plan, organise and deliver group-based learning
- TAEDEL402A Plan, organise and facilitate learning in the workplace.

Appendix A: Training Package Enrolment Snapshot

Program enrolments in MST Textiles, Clothing and Footwear qualifications by State/ Territory of student residence

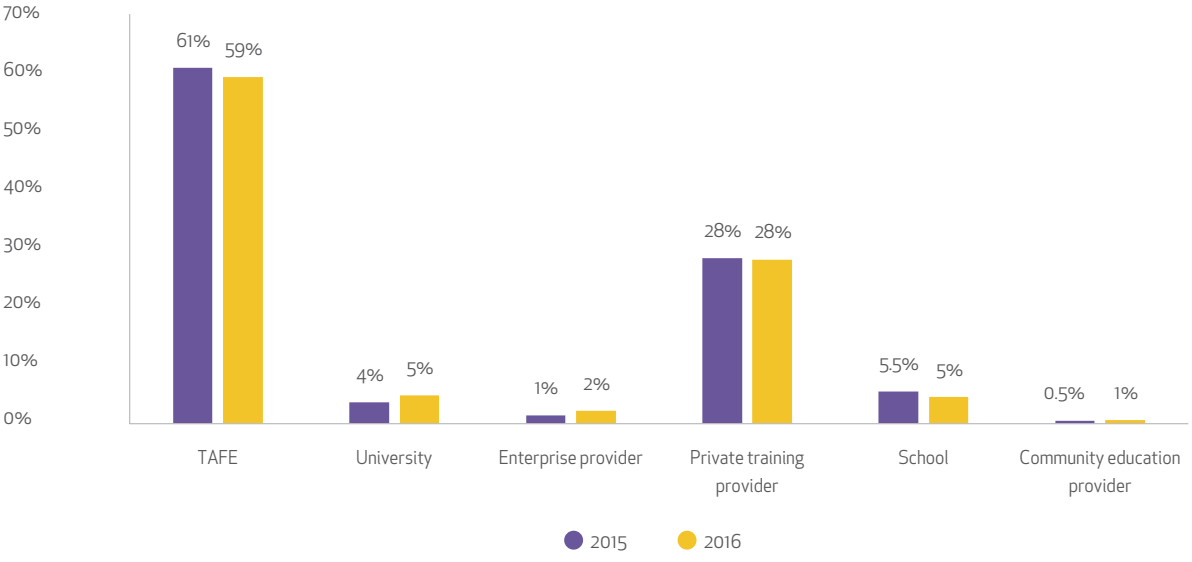
2016 Total VET Activity



NSW	986
VIC	2,844
QLD	852
SA	526
WA	965
TAS	109
NT	23
ACT	183

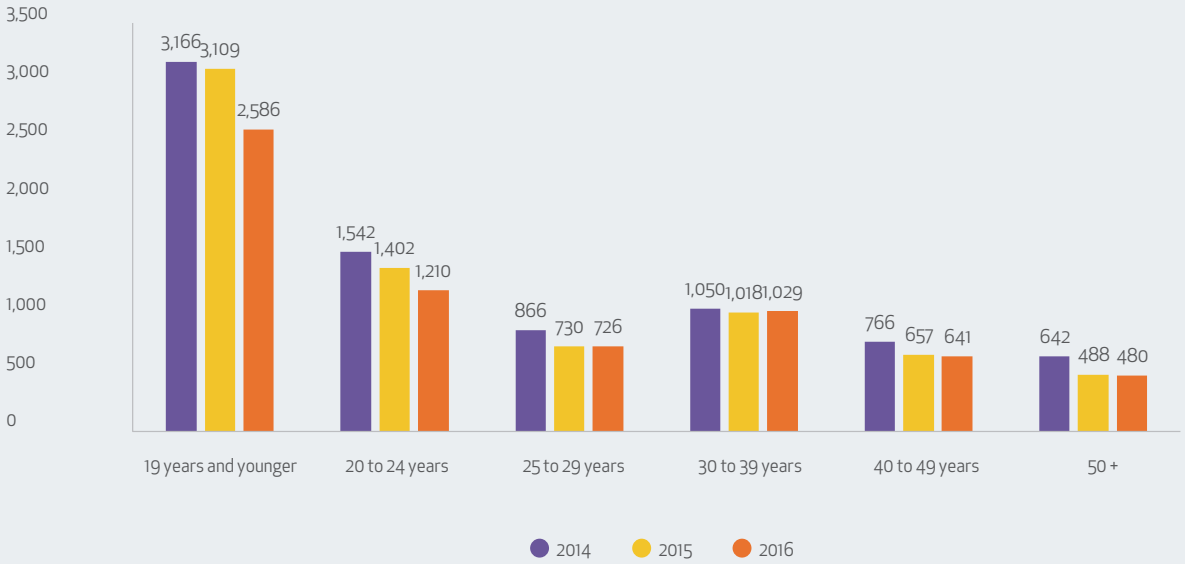
Program enrolments in MST Textiles, Clothing and Footwear qualifications by Training Organisation Type

Percentage of 2015-2016 Total VET Activity



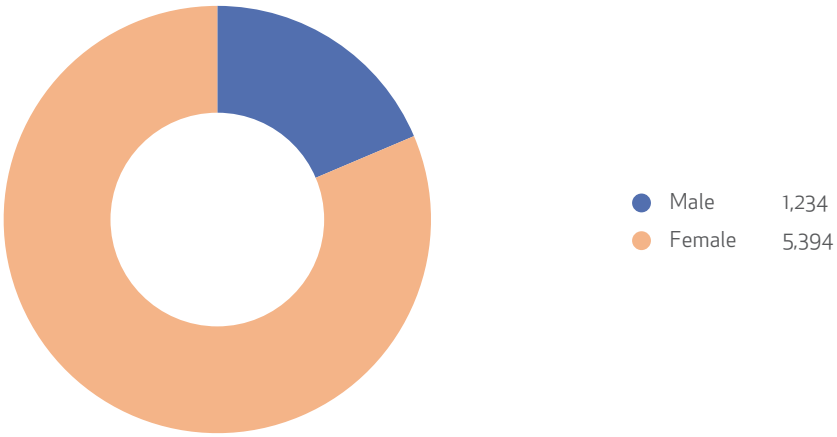
Program enrolments in MST Textiles, Clothing and Footwear qualifications by Age Group

2014-2016 Total VET Activity



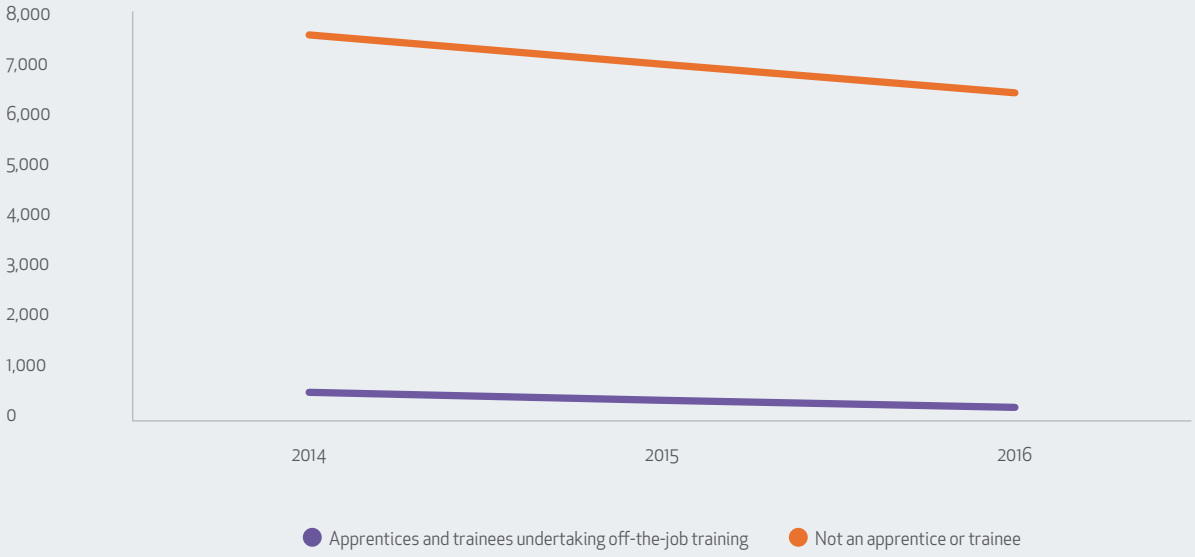
Program enrolments in MST Textiles, Clothing and Footwear qualifications by Sex

2016 Total VET Activity



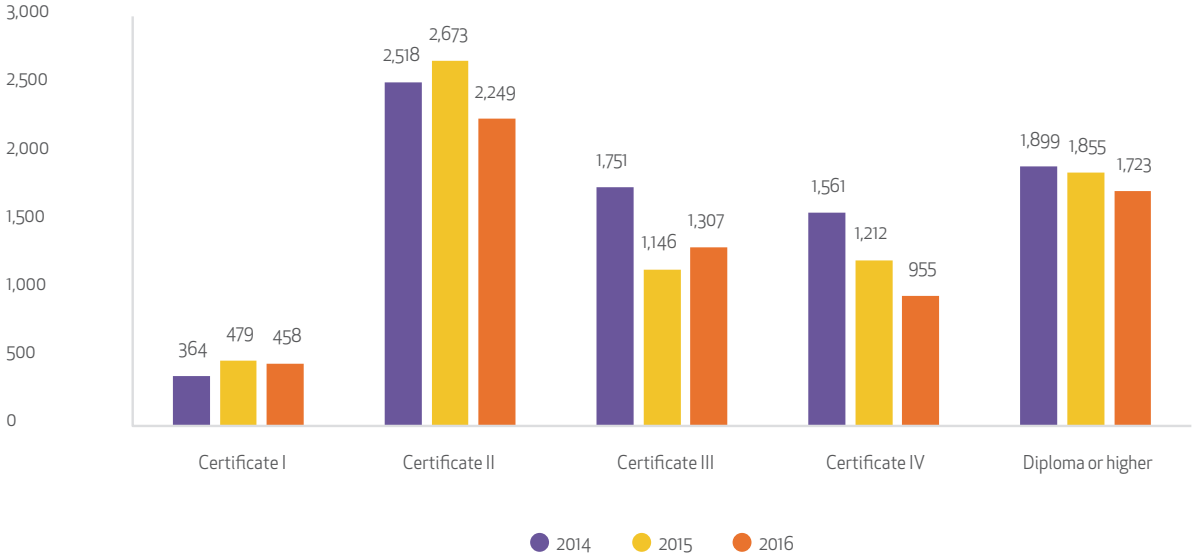
Program enrolments in MST Textiles, Clothing and Footwear qualifications by Apprentice/Trainee status of student

2014–2016 Total VET Activity



Program enrolments in MST Textiles, Clothing and Footwear qualifications by qualification level

2014-2016 Total VET Activity



All data in this Appendix is sourced from the VOCSTATS VET Provider Collection. 2016 Government Funded and Total VET Activity Program enrolments extracted September 2017

VOCSATATS data are 'randomly' adjusted by small amounts by a data perturbation tool to avoid the release of confidential data. Hence numbers are only approximate. The perturbation impact is negligible for most practical purposes. The effect can be significant and must be considered when interpreting small numbers

Appendix B: Industry Survey Analysis

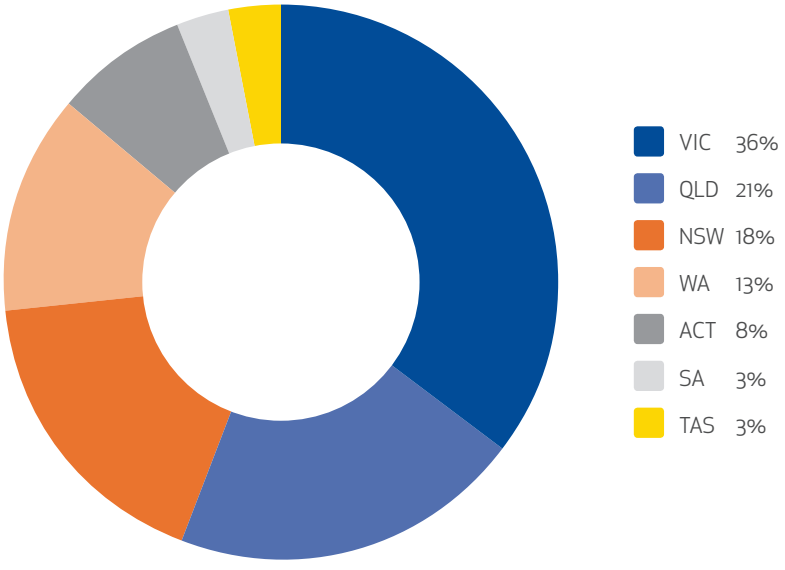
On behalf of the Textiles, Clothing and Footwear Industry Reference Committee (IRC), IBSA Manufacturing undertook the following two activities to inform the IRC Industry Skills Forecast and assist in guiding future training package development work.

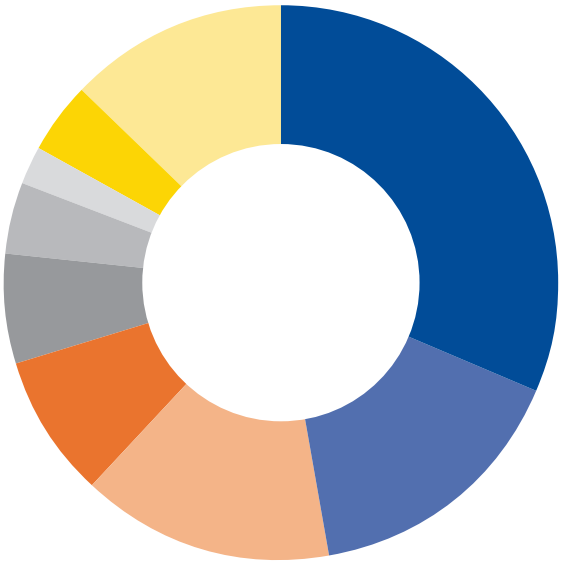
- Phase 1. In November 2017, a targeted survey was undertaken to gather preliminary industry intelligence from Registered Training Organisations (RTOs) regarding the current training package qualifications, and their alignment to industry needs and outcomes. An analysis of the survey is provided under the heading 'Phase 1 Survey'.
- Phase 2. In February and March 2018, interviews were conducted with a selection of RTOs to validate preliminary survey findings and provide further advice on whether the Textiles, Clothing and Footwear Training Package is meeting their clients' needs. A report on RTO Consultations is provided under the heading 'Phase 2 Report'.

Overall Consultation Profile

In total, 47 participants either responded to the survey or were interviewed. The majority of participants were from the eastern states of Australia (over 80%) .

Across all respondents, training for the major sub-sectors within the Textiles, Clothing and Footwear industry were covered. More than a third (35%) of participants provide training within the 'Applied Fashion Design and Technology' sector.





Applied Fashion Design & Technology	35%
Laundry / Dry Cleaning	15%
Clothing Production	14%
Footwear	8%
Textile Design	6%
TCF Services	4%
Millinery	2%
Leather Production	4%
Other	12%

MST Textiles, Clothing and Footwear Training Package Feedback

Participants were asked to rate how well the qualifications in the Textiles, Clothing and Footwear Training Package meet current industry needs. Phase 1 survey respondents indicated a satisfaction level of 65%, and those who participated in a Phase 2 interview provided an overall rating of 50 or higher for all qualifications.

The satisfaction level is illustrated below:

Participants indicated that, on the whole, the training package and qualifications meet industry needs. Areas that can be approved include the volume of learning and a need for greater flexibility in delivery and assessment. Further details on what aspects of training package components require change, what's working well and what could be improved are detailed in the Phase 1 Survey Analysis and the Phase 2 RTO Consultation Report.

Learner Needs

Participants reported that the learners' needs were being met well, particularly in their ability to gain practical experience as well as hands-on skills. A number of areas where learner needs could be better met are provided in the Phase 2 RTO Consultation Report.

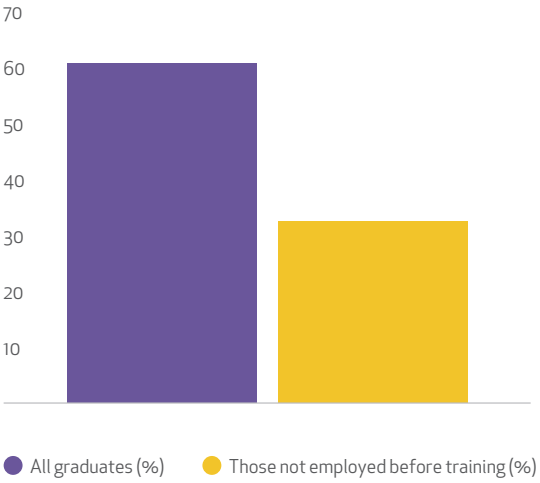
This is consistent with the NCVER 2017 Graduate Outcomes of VET Students by Industry for the LMT Textiles, Clothing and Footwear Industry, which indicates that 79.7% of graduates were satisfied with the training.

The satisfaction level is illustrated below:

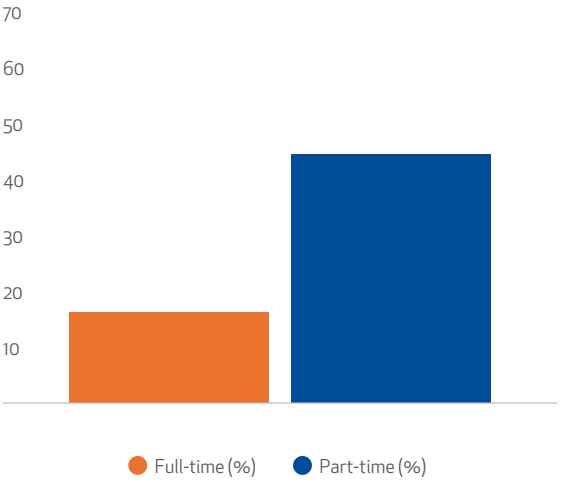
Employment Outcomes

Participants indicated that between 55% and 75% of graduates were employed in the industry. This is consistent with the NCVER 2017 Graduate Outcomes of VET Students by Industry for the LMT Textiles, Clothing and Footwear Industry. Future implications for the Training Package

Total employed after training



Employment type (all graduates)



Future implications for the Training Package

Participants identified a number of areas and key trends that might have implications for the training package over the next 3–5 years. These include:

- **Technological change** which includes Computer Aided Design (CAD), Electronic Pattern Making and Additive Manufacturing to produce prototypes
- **Offshore manufacturing** which will require a focus on networking and relationship-building skills as well as navigating the supply chain
- **Bespoke manufacturing** – a shift to minimum and low-volume production will require specialised production skills. Emerging trends of embroidery and accessories were identified as areas of employment and growth
- **Sustainable manufacturing** which includes knowledge and use of natural fibres and organic materials as well as ethical sourcing.

Further implications for the MST Textiles, Clothing and Footwear Training Package are provided in:

- **Phase 1 Survey:** 2017 Textiles, Clothing and Footwear Industry Survey Analysis
- **Phase 2 Report:** 2018 MST Textiles, Clothing and Footwear Training Package RTO Consultation Report.

Phase 1 Survey

2017 Textiles, Clothing and Footwear Industry Survey Analysis

On behalf of the Textiles, Clothing and Footwear Industry Reference Committee (IRC), IBSA Manufacturing conducted a targeted survey in November 2017 to gather industry intelligence from Registered Training Organisations (RTOs) regarding the current training package qualifications, and their match to industry needs and outcomes.

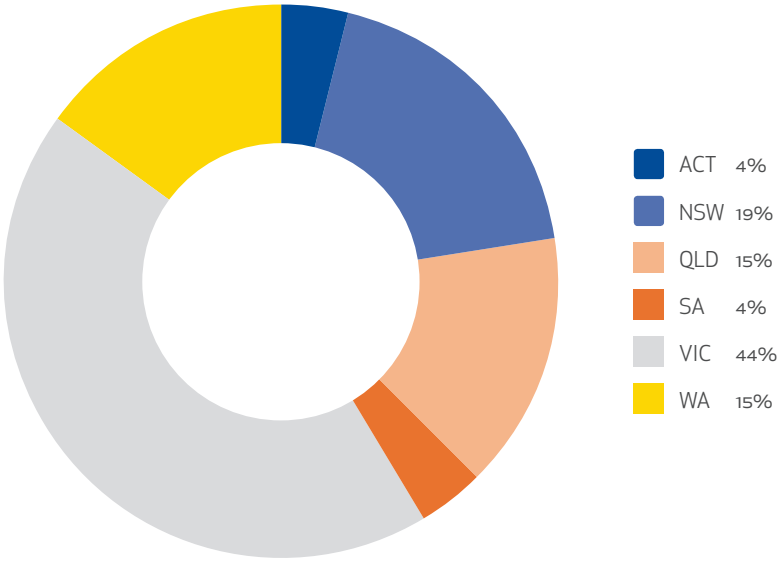
The survey results inform the Textiles, Clothing and Footwear IRC Industry Skills Forecast and assist in guiding future training package development work. An analysis of the survey results is below.

Survey Respondents Profile

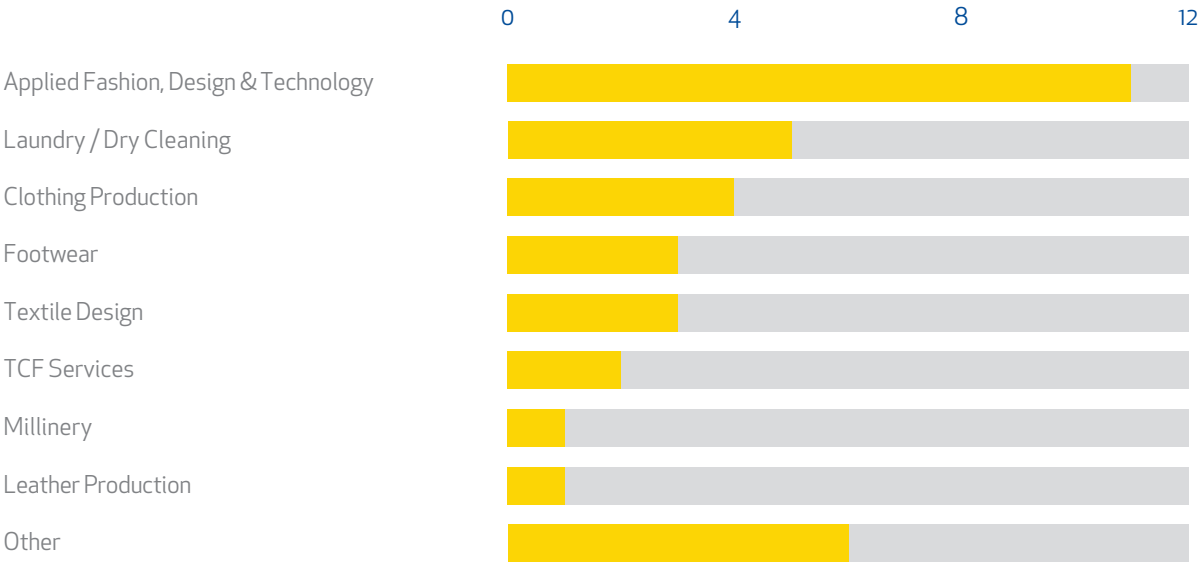
Of the 27 respondents who completed the survey, the clear majority of responses came from the eastern state of Australia (over 80%) and were training practitioners within an RTO (87%).

Across all respondents, training for the major sub-sectors within the Textiles, Clothing and Footwear industry were covered. More than half (57%) of respondents provide training within the 'Applied Fashion Design and Technology' space.

Respondent Location



The breakdown of training category provided by respondents is as follows:



MST Textiles, Clothing and Footwear Training Package Feedback

Respondents were asked to rate how well the qualifications in the Textiles, Clothing and Footwear Training Package meet current industry needs. The satisfaction level is illustrated below:

A satisfaction level of 65% shows that, on the whole, the qualifications meet industry need; however, some components may require updating to assist with implementation or to meet emerging skill needs.

When asked to clarify which aspects of training package components required change, the majority of respondents focused on modifying packaging rules. A third of respondents indicated that additional qualifications and new skill sets were required.

Aspects of training package components requiring change	modified packaging rules required	additional units required	additional qualification required	new skill set required	changes to core units
% of respondents	30%	18%	15%	15%	7%

Respondents commented that:

- The performance criteria, performance evidence and knowledge evidence for some units are 'over the top'
- There are too many units in Certificate III-level qualifications
- More flexibility within electives is required so the qualification can be tailored to the workplace
- The development of customised skill sets would assist learners who don't want full qualifications
- A review of the pre-requisites was needed to meet industry requirements
- Introduction of the following units should be considered:
    - working in a team
    - working in diverse organisations
    - change management
- The review and update of units to meet rapid changes in technology should be considered
- For the laundry and dry cleaning qualifications, consider reviewing the need for:
    - 'wash' units, as not all learners undertake this task
    - 'handling chemicals' units, as most machines are now self-managed or managed by vendors
    - management units at Certificate II level, as learners are unlikely to be in supervisory roles.

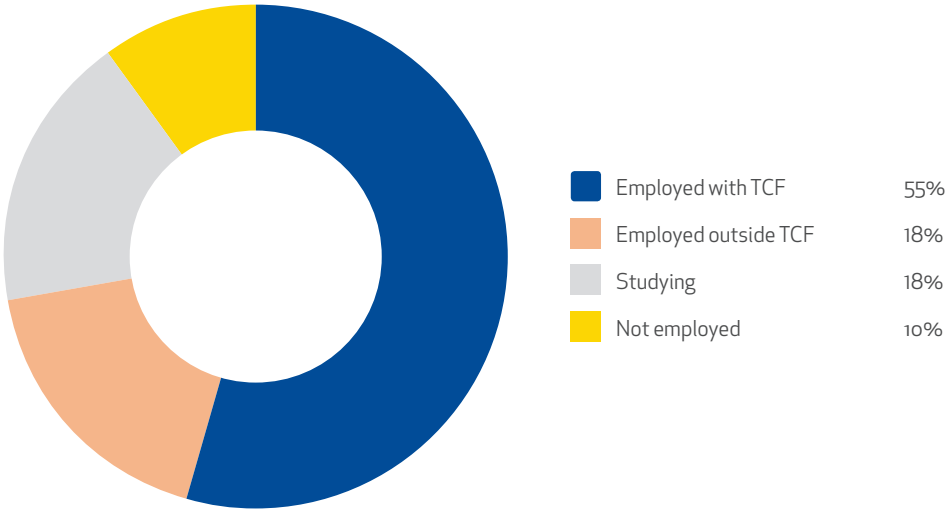
Employment Outlook

We asked survey participants what current skills training industry employers were seeking. Their responses fell into four main categories, as indicated in the table below.

Production skills (27%):	• Basic pattern making and grading/basic practical skills • Garment construction and alteration/trade-specific hand skills/production skills • Sewing and overlocking/machine operation skills • General production/operational skills
Supply Chain skills (14%):	• Whole of supply chain including international capabilities • Sourcing/purchasing/fashion buying/merchandising • Product range design and manufacture
Technology (12%):	• CAD/Globally-enabled manufacturing and design • Electronic pattern making/technical drawings • Social media • Excel/data analysis
Generic workplace skills (37%):	• Occupational health and safety incl. infection control and hygiene • Teamwork • Problem solving • Organisational skills and planning • Communication • Quality assurance • Marketing

Strong Employment Outcomes

Employment outcomes within four months of graduating were extremely positive, with 73% of graduates being employed, and a further 18% undertaking further study to gain employment.



Looking to the Future

According to survey respondents, the emerging skills needs required by employers fall into two broad categories: technical and trade skills. The specific skills required within these areas are noted below.

Respondents identified technical skills requirements twice as often as trade skills, indicating that this is likely to be a significant area of future training package development and these new requirements should be incorporated.

Technical skills:	• 3D design + manufacture/advanced manufacturing • Social media/Online communications with customers • Digital skills – design/merchandising/pattern making • Radio frequency identification tags (RFID)
Trade skills:	• Textiles – new technologies/green/advanced fabric technology • Sustainability • Multi-skilling (future-proofing)

Survey respondents also provided additional comments regarding current training package or future training requirements within this industry to further inform the Textiles, Clothing and Footwear IRC.

The following extracts may be of value to the IRC in supporting them with their training package development work:

> " The existing qualifications are broad and do not provide a specific set of skills that match to employment award wage levels e.g. Diploma in Applied Fashion Design provides minimal training across the entire industry set of skills, employers are expecting to hire specific competencies in patternmaking or CAD or Teck packs, quality assurance or swimwear product development… "

> " The aged care laundries are non-compliant to the Laundry Standard…and there are no skills sets or qualification to meet such a need. "

> " The Fashion Industry is constantly changing - the Training packages do not offer enough electives that are industry specific to reflect Retail changes in Business… "

> " …Need a course for accessories. "

> " Reduce the number of UoCs in the fashion design diplomas. "

> " The future of the TCF service sector is in dire need of attracting and retaining personnel. While the package as it sits now is great at meeting the needs of employers, there is a real issue of apprenticeship take up. "

Phase 2 Report

2018 MST Textiles, Clothing and Footwear Training Package

RTO Consultation Report

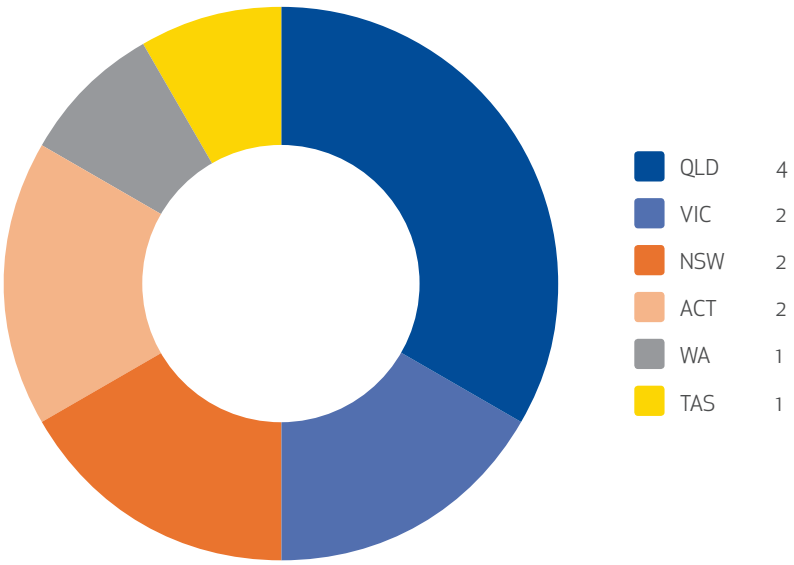
About the consultation

On behalf of IBSA Manufacturing, Ithaca Group conducted interviews with a selection of Registered Training Organisations (RTOs) to find out whether the current Textiles, Clothing and Footwear Training Package is meeting their clients' needs. The findings of this consultation feed into the Industry Skills Forecast and inform ongoing training package development work.

Participants and RTO Locations

Twelve interviews were conducted (by phone or face-to-face) with 20 participants from a mix of public and private RTOs across Australia [see Figure below].

Locations of RTO representatives interviewed



Those consulted delivered a range of qualifications from the Textiles, Clothing and Footwear Training Package[42] including qualifications in:

- fashion design, merchandising and technology (6)
- clothing and textile production (3)
- footwear and leather production (2)
- laundry and dry cleaning (2).

Six of the RTOs consulted provide training related to 'Applied Fashion Design and Technology', with half of the qualifications in this area delivered at Certificate IV level or higher.

Industry and Employer Needs

In order to find out how well qualifications within the Textiles, Clothing and Footwear Training Package are currently meeting the needs of industry and employers, respondents were asked to identify what's working well, what could be improved and what's missing in the qualifications that they deliver.

Overall rating

Respondents rated the qualifications that they deliver on a scale of 1-100, with 100 representing a perfect score in meeting the needs of industry and employers. Responses showed that in general (with skilled interpretation by trainers), the training package is adequately meeting the needs of industry and employers. All respondents provided an overall rating of 50 or higher for all qualifications.

However, the range of responses varied greatly depending on which industry subsector the training relates to, and whether the qualification/s being delivered are lower-level qualifications (i.e. Certificate III or lower) or Certificate IV and above.

For example, Clothing and Textile Production qualifications rated highly at 80-90 by relevant respondents. Here, the comment was made that the current training package 'is a vast improvement on the previous.' In contrast, Footwear qualifications, although considered satisfactory overall, were rated fairly low, with an average rating of 65.

The ratings given to Applied Fashion and Design Technology qualifications were much more variable. Here, the effectiveness of the MST50116 Diploma of Applied Fashion Design and Merchandising in meeting employer and industry needs is particularly contentious, receiving both the lowest rating (50) and the highest (95) for the same qualification. The Certificate III in Applied Fashion Design and Technology consistently rated well, with respondents noting that it provides 'good basic skills' and an 'excellent range of electives for students that is a good cross-section of the skills that industry needs.'

42 Two respondents had either drawn units of competency from qualifications in this package in the past, or had investigated doing so, but were not currently delivering it.

While the overall sense is that industry needs are currently being met, a number of participants qualified their answer by saying that this is with intervention: they are able to make these qualifications work by paying close attention to unit selection and modifying, translating or tailoring units to meet industry needs.

What is working well?

Respondents were asked to describe what they believe is working well to meet the needs of industry and employers in the qualifications that they currently deliver. Overall, there is a sense that the training package is heading in the right direction, with one respondent suggesting 'it's just a matter of really digging in and fine-tuning, keeping what's essential and getting rid of what's not'. In addition, respondents point out that frequent overhauling of the training package creates a large amount of unwelcome work and expense to repeatedly rewrite qualifications. While there are improvements to be made, there is no suggestion from respondents that these require major changes, rather just 'tweaks' to what already exists.

Overwhelmingly, the delivery of knowledge, skills and understanding that industry needs is felt to be the most significant factor that is working well in the training package, in particular:

- the delivery of 'hands-on' skills that give learners the everyday knowledge they need in the workplace
- a greater focus on design in the Certificate IV in Custom Made Footwear
- good coverage of emerging skills such as key cutting in the Certificate III in Footwear
- meeting industry need for customisation skills through decorative units such as pleating and beading within Clothing and Textile Production.

The inclusion of digital technology units within Fashion Design and Technology was also well received.

While some respondents found elements of the training package restrictive, those delivering Clothing and Textile Production qualifications felt that the depth of detail and direction provided in the current training package was a vast improvement on the previous qualifications which were described as 'really vague'.

Careful attention to unit selection, planning and consultation, as well as teachers' ability to make units relevant due to their industry experience, were also suggested to be key factors that help qualifications meet current industry needs. This was especially evident in one public RTO, where careful planning for the delivery of Applied Fashion Design and Technology qualifications enabled the creation of regional 'specialisations' that satisfy both industry need for skills and learner needs for flexible options, despite industry, demographic and geographical challenges. This upfront planning included:

- including regional consultation and cooperation with the state Industry Council
- identification and resolution of confusion in the wording of unit title/s and anomalies in unit prerequisites
- implementation of distinct skill sets.

These achievements are well regarded, with this RTO's Applied Fashion and Design Technology qualifications reportedly held up as a 'prime example' of how to create a solid foundation for regional skills development.

What could be improved?

The two most commonly reported concerns with the current training package were the considerable volume of learning and a need for greater flexibility in delivery and assessment, particularly at the higher levels within fashion design, merchandising and technology qualifications. Other areas identified for improvement include modifications to the name and scope of some qualifications, the usefulness of the training package companion volumes, hours allocated to units, language and clarification of 'Australian Standards'.

The need to reduce the amount of information repeated in units was identified across the training package qualification areas. This is felt to be creating too many irrelevant details in each unit, contributing to assessment overload and impacting teaching/learning time. It also creates a lot of hard work for teachers, 'paperwork for the sake of paperwork' and the risk of failing audits because of strict auditing requirements.

It was also suggested that, overall, the ability of the MST Textiles, Clothing and Footwear Training Package to meet job demands for complex technical skills and complex problem-solving knowledge needs to be investigated. It was noted that academic degree programs do not address this and the industry requires more hands-on, applied learning training outcomes.

Specific comments by industry area include:

Footwear and Leather Production

Respondents suggested a need to:

- Broaden the scope and name of the qualification, as the term 'Custom Made' footwear is only relevant to small business. For example, there are brands that are designed here and made offshore and there are large retailers (e.g. Cotton On and Country Road) with jobs to offer. Changing the name and focus of the qualification would allow for accommodation of a broader range of industry needs.
- Include units that develop hand skills in the footwear qualification. Basic skills are what employers are looking for and there is a feeling amongst some employers that these trade and hand skills are lacking.
- Improve Recognition of Prior Learning (RPL) pathways. While this is a delivery issue and not related to the qualifications themselves, lack of recognised RPL pathways is creating problems as most of the apprentices are from the footwear repair industry – an industry in which most people are operating small businesses with no certification, as they have just learned 'on the job'. In these cases, it is difficult to determine an appropriate RPL pathway.

Clothing and Textile Production

Respondents delivering qualifications in these areas felt that the recent changes to the training package involved merging textile design and production without much regard for the needs of industry. They suggested a few ways in which these could be improved, including:

- Clarify references to Australian Standards. For example, which Australian standards? How should they be met?
- Review hours allocated to units. These need to be realistic and reflect the time that it actually takes to complete practical components.
- Improve the packaging rules and prerequisites to make delivery more flexible. This is particularly an issue when mapping units between Certificate IV and Diploma qualifications. (For example, currently the Diploma unit to analyse and use colour requires the prerequisite unit 'Set up print screens'; however, setting up a print screen has no relevance to analysis and use of colour.) Some noted that issues like this and the level of inflexibility as to what units must be delivered led the RTO to decide that delivering the Diploma was not viable.
- Remove typos/errors and ensure that language used is universal. Some suggested that language is very NSW-centric – for example, the OH&S area uses specific terms and language applicable to NSW, but not VIC.
- Ensure that skills are reflective of current industry practice. Some noted that industry (particularly big business) has moved on in the use of technology and this is not always reflected in the units. For example, skills in the use of hand looms are still covered, but they are not used in large businesses anymore. It is worth noting, though, that in some small businesses there is a resurgence of their use.

Laundry and Dry Cleaning

Respondents identified a number of new and combined units that would improve laundry and dry cleaning qualifications and skills outcomes. These include:

- Core units in infectious disease control. Currently, laundry qualifications for aged care are delivered as part of the Health Support Training Package. It was suggested that these units/qualifications need to be brought into the Laundry Operations qualifications as core units. The respondent stressed that there is a big gap in the provision of laundry skills and infection control training that adequately addresses important public health.
- A special unit is needed on ironers and ironer safety.
- A unit is needed in relation to RFID (electronic tracking) which is now implemented in the large laundry services and 'about to hit the industry in a big way.'
- A unit is needed that helps learners to understand the complexity of the standard.

Combining skill sets in both laundry and dry cleaning was identified as another way that the qualifications could be improved, as there are a number of competencies that work together.

Fashion Design, Merchandising and Technology

Overall, the majority of respondents felt that qualifications in this area could be improved by:

- Lowering the number of units required to complete fashion qualifications, bringing it into line with equivalent qualifications and reducing the risk that students are 'over-prepared'. Although, some suggested that it was important to ensure that graduates had production skills and that these shouldn't be taken out of the qualifications.
- Reviewing core and elective units in lower-level qualifications. Respondents suggested a number of ways that lower-level qualifications (i.e. Certificate II – IV) could be improved by shifting specific units from elective to core. In these cases, the number of core units would increase and electives decrease in each qualification.
- Increasing flexibility and delivery options by modifying packaging rules and reviewing prerequisites, core units and electives at higher levels. Respondents cited examples where: prior skills or knowledge are required to complete a unit, but no prerequisites are listed; core units are not felt to be the most important units to deliver; there are mapping anomalies between lower-level and higher-level qualifications (e.g. Applied Quality Standards is a core unit in the Diploma of Applied Fashion Design and Merchandising, but it is not listed as a unit within the Advanced Diploma). Some specific examples for how these higher-level qualifications could be improved were provided, including reducing the number of specialist electives required in the Advanced Diploma, and merging and renaming units within the Diploma. Two RTOs indicated that they can't deliver Diploma and Advanced Diplomas that meet local industry need because of perceived 'lack of flexibility' in delivery of the qualification. Reducing the assessment load for RTOs and learners by ensuring that the training package only specifies what needs to be taught and assessed, and is relevant to the core aims of each unit. Currently, there is too much information repeated across units (for example, 'Quality Criteria' is included in every unit yet has little relevance to a unit like Analyse Colour and still needs to be assessed). One respondent suggested that separating 'delivery' and 'assessment' more clearly within the training package might assist here.
- Avoiding 'too much detail' or listing too many specific items, tools, and/or media to be utilised or covered in units. These should be kept minimal or optional to allow teachers greater flexibility in how to deliver given the resources, time, and budget available. For example, one RTO cited a fashion illustration unit which specifies use of an airbrush. These are expensive and uncommonly used in industry. This RTO now has to purchase one specifically so that it can deliver this unit. Another RTO is struggling to teach using the required fibres and fabrics as they don't have access to the new materials, nor does their local industry require it.
- Ensuring that where the quantity of assessment items is specified, this is reflective of the time available for that unit and allows an appropriate balance of teaching/learning time to develop 'hands-on' skills. There is also a need to ensure that the number of different types of assessment specified in performance criteria and performance evidence actually match up.
- Improving the language used. There are instances where greater definition, clarity or more industry-relevant wording is required (For example, the unit MSTSD - 4003 refers to making 'slits', however this is not a current industry term).

Respondents held differing views on whether qualifications should be merged or separate. Some felt that, at the higher levels, the merging of different qualifications such as fashion design and merchandising makes it difficult to deliver streamlined qualifications that are relevant to industry needs, as it requires too many core units. It was suggested that separating business and merchandising would provide more options and flexibility to meet the needs of industry.

However, referring to the same qualification (MST50116 Diploma of Applied Fashion Design and Technology), another respondent felt that including merchandising in the Diploma focused training on emerging skills and industry areas, noting that 'The inclusion of merchandising in the current qualifications is taking it in the right direction. Need to expand on this and delete redundant units to bring the volume of learning down.'

Other areas for improvement that respondents identified include the training package companion volumes which were cited as being useless, hard to follow and extract meaning from, and repetitive, with a respondent noting that 'We don't use them or find them useful.'

Overall, it was also noted that the industry needs a greater focus on higher-level technical skills. One respondent identified that the top 3 job demands employers are seeking within the jobs market for Fashion Design and Production are:

- Construction knowledge and expertise
- Pattern, grade and fit expertise
- Textile testing and fabrication knowledge.

These are skills that are best developed through hands-on, applied learning in higher-level VET qualifications.

What is missing?

Respondents identified what they felt was missing from the qualifications that they deliver in order to meet the needs of industry and employers.

With regards to the MST Textiles, Clothing and Footwear Training Package overall, the absence of specific identification of underpinning foundation skills was noted by some respondents as a shortcoming. It was suggested that trainers would benefit from the inclusion of a table that identified where foundation skills are applied in the Performance Criteria, similar to that provided in other training packages.

Gaps identified in specific industry sectors are outlined below.

Footwear and Leather Production

- Business skills in the higher-level qualifications. 'By only giving students vocational skills, we are not giving them anywhere else to go.'
- Skills in common tasks such as the supply and fitting of heel blocks and non-slip shoes and half soles – they were previously covered in the training package, but not in the current version.

Laundry Operations and Dry Cleaning

- Core units in infectious disease control, alongside a general focus on the importance of managing biosecurity issues within laundry and dry cleaning as infectious diseases like anthrax and ebola – all transferable on linen – become an increasing threat.

Clothing and Textile Production

- Inclusion of new technologies, e.g. CAD software design.

Fashion Design, Merchandising and Technology

- Focus on merchandising and buying for large retailers. This is where students want to go and where the jobs are. This requires a shift to digital technology; however, the basics are still relevant. 'Unless you know the basics, how will you be an effective buyer?'
- Digital skills. The inclusion of merchandising in the current qualifications is taking a step in the right direction.
- Units that address the growth in the market for alterations. Currently, there are only two units that cover fitting at Diploma level. Including more units would help to meet the growing market in alterations due to the growth of online purchases (customers buy online and then need to get resized/refitted).
- The use of new fabrics (such as stretch fabrics and sustainable materials). Students need to spend more time sewing and handling new materials to meet retail shifts and growing consumer demand in these areas.
- Focus on bespoke, custom and specialised work, such as menswear, alterations and bridal. Menswear (tailoring) is missing completely from the training package and there are examples of industry demand here. One RTO was recently approached by a menswear business that is shifting their operations from Asia to Australia; however, 'none of our students can do it'. While there are units which may be adapted to these needs (e.g. pattern making), there is not the time or units available to specialise in this.

Future Implications for Training Packages

Respondents were asked to identify what's on the horizon that might have implications for the training package over the next 3-5 years. Their responses are summarised below.

Technological Change

New technologies were identified across all industry qualification areas, which will impact training package development within the next 3-5 years. Examples include the use of:

- Computer Aided Design (CAD) technology and 3D printing to produce footwear prototypes
- Radio Frequency Identification Device (RFID) electronic tracking of individual laundry items
- 3D draping and CAD software in fashion design and technology.

Respondents identified that the rapid growth of new technologies and the speed at which industry change is occurring has significant implications for the training package. Rapid technological change also presents funding, skills and resources challenges for RTOs as they try to keep pace with industry change, while also balancing the need to deliver core manual skills.

Offshore Manufacturing

Some respondents felt that the continued shift towards offshore manufacturing within clothing and textiles production will require a greater focus on networking skills and learning how to build relationships with offshore manufacturers, suppliers and others, and may also shift the focus of training to areas like design and pattern making, rather than production.

Industry Trends

Respondents identified a number of trends within fashion and textiles that will have implications for training packages in the next 3-5 years. These include an industry shift amongst large retailers towards local alterations of mass-produced garments and textiles. This trend will require growth of bespoke, minimum production and low-volume manufacturing skills, and the training package needs to be able to reflect these more specialised needs. Fitting and alterations were also identified as associated skills that need greater focus to reflect these trends, together with quality assurance and the ability to assess garments from a specifications sheet.

Sustainability is another emerging trend and an area of growth for fashion and textiles. This will have training package implications, including the need to consider units that focus on how materials can be sourced sustainably and the use of natural fibres and organic materials.

There is also a growing push for greater innovation within the Australian fashion industry. It was suggested that the Australian fashion industry needs to define itself and develop its own look (in much the same way that NZ has). At the moment, respondents feel that units of competency don't allow for innovation; instead they're very 'flat' and reflect the need to meet current industry needs. It was suggested that to meet future skills needs, training package developments will need to encourage more exploration, innovation and critical thinking within fashion design and technology.

Business Diversification

Businesses in the footwear industry are increasingly experiencing financial pressure and beginning to diversify the activities they undertake internally, which they may have previously outsourced (e.g. bookkeeping and accounting). It was felt that there will be a greater need to add business skills training to the Footwear qualification in order to meet these diverse business needs in the future.

Learner Needs

In addition to employer and industry needs, the study aimed to assess how well learners' needs are being met. To do this, respondents were asked to what extent they feel that the current qualifications are meeting the needs of learners. In general, RTOs consulted in this study felt that their learners' needs were being met well, particularly in their ability to gain practical experience and hands-on skills. A number of RTOs emphasised that this is because of creative delivery by RTOs, rather than the qualifications themselves.

Respondents also identified a number of areas where learner needs could be better met. These include:

- Creating better career pathways for learners within higher-level qualifications in Custom Made Footwear and Clothing and Textile Production. Including business skills at Diploma level could help.
- Reviewing allocated hours for some units within the Clothing and Textile Production qualifications as they don't realistically reflect what the unit requires students to do. For example, the teaching/learning time for a unit can be 30-40 hours; however, within that time they are expected to make 10 repairs. There needs to be more practical time allowed to enable a holistic approach that covers the entire process.
- Ensuring the delivery of practical units that develop hands-on skills within laundry and dry cleaning qualifications and delivery by qualified trainers with appropriate industry experience and knowledge.
- Embroidery is an area in which there is growing employment available. This could be better catered to in terms of the qualifications offered and directing learners towards these opportunities.
- Reducing the volume of learning for Fashion Design and Technology qualifications in order to lower the time it currently takes for students to complete their qualification and reduce attrition rates.
- Reviewing and/or simplifying qualification names to better reflect what is provided. For example, one RTO does not deliver 'merchandising' as part of their Fashion Design and Merchandising qualification. Having to include this in the qualification name is confusing for students. Similarly, some qualification names could be simplified (e.g. drop 'applied' from Applied Fashion Design and Technology as it is unnecessary).
- Change the ability to gain 'direct entry' into Advanced Diploma of Applied Fashion Design and Merchandising. This is not the case as students need to have the Diploma, and it's misleading and confusing for students.

Employment Outcomes

Respondents were asked whether graduates of the qualifications are getting jobs in the industry, and why or why not. Approximately 75% of respondents felt that students were gaining employment in industry at the end of their qualification. Where students are not going on to be employed, the biggest reasons are cited as being:

- Wanting to start own business (30%)
- Lack of jobs in the industry (30%)
- Qualifications are being used as a 'stepping stone' to further study (30%).

Appendix C: Future Skills Outcomes

The Australian Industry and Skills Committee (AISC) commissioned the Future Skills and Training Resource which summarises data on current and future Australian and international megatrends, to support Industry Reference Committees (IRCs) in developing their Industry Skills Forecasts and Proposed Schedules of Work.

The following trends and considerations are based on Textiles, Clothing and Footwear IRC discussions. This appendix presents the preliminary thinking of IRC members in order to stimulate broad discussion in industry.

Trends

Society and Culture

The key trends affecting the Textiles, Clothing and Footwear Industry are:

Global Mobility: This trend is affecting the industry currently. The industry is steadily declining as labour moves offshore. Employers are struggling to fill current positions in general sewing, furnishing and preparation of specialised textiles. This will be further compounded by recent changes to 457 visa arrangements, which no longer assist employers seeking experienced overseas workers to fill labour gaps in Australia.

Many Australian workers consolidate their skills overseas, particularly around supply chain. Australia's SME environment results in workers having good versatility and understanding of different sectors.

Ageing Population: This trend will impact the industry within the next five years. Much of the industry's skills and knowledge is embedded in workers now in their 60s and 70s. Industry expertise and specific technical skill sets and knowledge are disappearing; there is no funded pipeline for new entrants to the industry. Ageing business owners are limited by not having successors and having to close their businesses.

Changing Work and Career Values: This trend will impact the industry within the next ten years. Careers advice on different sectors within the manufacturing industry needs to be improved as many perceive it as a 'declining' industry with limited future work opportunities; however, younger tech-savvy generations continue to buy, use and sell fashion.

Many new industry entrants are self-taught and undertake sporadic skills development through a do-it-yourself approach, accessing bites of training as needed via online or short courses (accredited and unaccredited). The result is that people are continually re-learning skills and specific industry skills like sewing, cutting and pattern making are dying out.

Business and Economics

The key trends affecting the Textiles, Clothing and Footwear Industry are:

Changing Workplace Dynamics (Now): This trend is affecting the industry currently. Job roles are becoming more fragmented and less specialised; one person now provides a quote and project-manages the whole supply chain, outsources all or part of the production and, in some cases, coordinates the implementation. SMEs are subcontracting much of the local production but losing any influence over training these workers/contractors.

Changing Workplace Dynamics is linked to **Start-up thinking** and **Workforce vulnerability.** Increased pressures related to having to work across the supply chain has decreased work-life balance, with many skilled workers (the experienced doers) moving to new industries.

Behavioural Economics and Psychology/Empowered Customers: This trend will impact the industry within the next three years. Consumer behaviour is driving product demand, resulting in 'fast fashion'. The industry is grappling with how to respond and service the market. Consumers seeking serviceability are demanding a more hands-on approach with regard to designing their pieces and accessing end-to-end ability to repair and alter. Consumer behaviour is showing signs of shifting from owning to renting outfits.

Technologically advanced textiles for medical applications is another emerging market.

These changes have a polarising effect on the industry with the need for skilled workers in both bespoke manufacturing and large-run production skills.

Skills Mismatch: The training package qualifications in fashion design are focused on setting up their own label and do not currently include other key areas such as production or leadership skills. A tension within the qualifications exists as it's difficult to focus on both craft and production skills and employment or self-employment.

Start-up Thinking: This trend will impact the industry over the next ten years. Many need to start up their own business as there are limited opportunities to work elsewhere. These small businesses find it difficult to attract investors as corporates are risk-averse to entering new markets or trialling different production models.

Technology

The key trends affecting the Textiles, Clothing and Footwear Industry are:

Digitisation/Augmented Reality (AR) and Virtual Reality (VR): The industry is beginning to embrace new technologies with virtual stores. Some local designers are now able to use holograms to showcase their design on international catwalks. The introduction of 3D printing reduces the need for labour in some instances.

Automation in the form of Programmable Logic Controllers and sensors to gain efficiencies and lower costs also has a significant impact on some sectors such as Laundry Operations with larger operations. Smaller operators often find it cost prohibitive to automate and are unable to keep up with larger businesses.

Cross-Disciplinary Science/Big data: Workers now need to understand mathematics, provenance, quality management, due diligence, fabric type, and customer fit to participate in the industry. Large retailers now use big data to predict what people want to buy. However, boutique retailers remain attractive to consumers as they're able to provide customer service and retail expertise in regard to garment and textile knowledge.

Artificial intelligence (AI) and Machine Learning: The industry could see onshoring of some production as labour inputs are reduced in favour of robots.

Resources and Environment

The key trends affecting the Textiles, Clothing and Footwear Industry are:

Financial viability: The ability for SMEs (which dominate the industry) to innovate and adopt new practices and technologies is hampered due to costs.

Access to Quality Internet: The need to access high speed, reliable internet is essential for online collaboration, real-time ordering and online tracking of orders through the supply chain.

International Sustainability Action: Australian industry is behind the international community in regard to becoming a sustainable industry. Many of the initiatives in this area are driven by consumers' growing interest in ethical products. There are very few textile recyclers in Australia, and the industry is grappling with ethical sourcing and how to treat the various synthetics in clothing. An emerging issue will be how to recycle the wearable technologies.

For the dry cleaning sector, consumers and government are seeking corporate and social responsibility and ethical buying and trade waste disposal.

Climatic weather shifts provide opportunities for the industry, as textiles are often used in response to adverse events, such as cleaning up oil spills, creating new materials which won't be damaged in weather events, as well as having emergency housing or tents.

Political and Institutional

The key trends affecting the Textiles, Clothing and Footwear Industry are:

Innovation ahead of regulation: The industry needs to strengthen self-regulation and promotion of good practice in some areas and sectors with inconsistent licensing requirements; for example the installation of textile structures which includes sails or shades.

Political **Appetite for Reform:** There seems to be no political appetite to make it easier for SMEs to run successful operations in the industry.

Considerations for Training

Employers/Industry

Employers and industry (with assistance from government) need to work together to establish collaborative partnerships which:

- Promote the industry as an attractive opportunity for apprentices
- Share production technologies to increase skills base
- Offer workers opportunities to upskill and learn about different areas of the industry
- Retain experience in the industry.

Learners/Workers

For the DIY learners, ensure the core industry skills are articulated and available and provide options to add on skills as needed using Massive Open Online Courses (MOOCs).

Upskill experienced workers to become industry mentors.

Demand for lower-level qualifications will decline in favour of automated production needing technicians to maintain operations.

Government

Reduce the bureaucracy for small businesses to be able to take on apprentices. Many businesses outsource their production, and legislation prohibits putting on a subcontractor as an apprentice.

Consider utilising existing government training facilities to create 'makers' spaces where microbusinesses and communities can access industry equipment and learn to collaborate.

Education and Training

The lack of apprentices is also compounded by thin markets as not every state has access to suitable training. Many Registered Training Organisations race learners through qualifications and don't take the time to embed the necessary skills.

The companion volume should be looked at for opportunities to 'cross-pollinate' with other industry's skills or adding other skills or qualifications in other areas which support the technical trade.

Trainers need to be better equipped for delivering digital skills such as CAD, digital measuring and 3D design. These skills are key to encouraging new entrants and making industry roles a little more exciting.

By streamlining Recognition of Prior Learning processes for experienced workers, it will give them recognition, value their skills and knowledge and retain their skills.

Appendix D: Employment Occupations

Employment trends for Textiles, Clothing and Footwear Occupations: 2006, 2011 and 2016 Census with estimated May 2017 employment and projected employment growth May 2017–May 2022 (%)

ANZCO Code and Title	Employment trend 2006, 2011, 2016	Skill Level	Employment May 2017	Projected Employment Growth May 2017 to May 2022 (%)
2323 Fashion, Industrial and Jewellery Designers		1	12,000	20.1%
3931 Canvas and Leather Goods Makers		3	2,100	0.0%
3932 Clothing Trades Workers		3	8,000	-13.6%
3933 Upholsterers		3	3,000	0.0%
7116 Sewing Machinists		4	5,700	-30.2%
7117 Textile and Footwear Production Machine Operators		4	1,300	-17.2%

ANZCO Code and Title	Employment trend 2006, 2011, 2016	Skill Level	Employment May 2017	Projected Employment Growth May 2017 to May 2022 (%)
8115 Laundry Workers(General)		5	19,900	2.6%
8399 Other Factory Process Workers		5	10,200	-9.6%

Source: ABS Census of Population and Housing: 2006, 2011 and 2016 and Department of Jobs and Small Business Labour Market Information Portal (LMIP) Occupation Employment Projections May 2017 – May 2022

Skill Level 1 is commensurate with a Bachelor degree or higher qualification

Skill Level 2 is commensurate with an Advanced Diploma or Diploma

Skill Level 3 is commensurate with a Certificate IV or III (including at least 2 years on-the-job training)

Skill Level 4 is commensurate with a Certificate II or III

Skill Level 5 is commensurate with a Certificate I or secondary education

Appendix E: Employment in Occupations by age group

Age profile of employment in selected textile, clothing and footwear occupations: 2006, 2011 and 2016 Census with estimated May 2017 employment

Occupation Code and Title and May 2017 employment	2006 Age Profile	2011 Age Profile	2016 Age Profile
2323 Fashion, Industrial and Jewellery Designers 12,000			
3931 Canvas and Leather Goods Makers 2,100			
3932 Clothing Trades Workers 8,000			
3933 Upholsterers 3,000			
7116 Sewing Machinists 5,700			
7117 Textile and Footwear Production Machine Operators 1,300			

Occupation Code and Title and May 2017 employment	2006 Age Profile	2011 Age Profile	2016 Age Profile
8115 Laundry Workers(General) 19,900			
8399 Other Factory Process Workers 10,200			

Source: Department of Jobs and Small Business Labour Market Information Portal (LMIP) Occupation Employment Projections May 2017 – May2022 and ABS Census of Population and Housing: 2006, 2011 and 2016.

Age groups from left to right are 15-19 years, 20-29 years, 30-39 years, 40-49 years, 50-59 years, 60 years +.

Appendix F: Occupation Classifications

The following Australian and New Zealand Standard Classification of Occupations (ANZSCO) Unit Groups and Occupations have been selected to illustrate employment in the Textiles, Clothing and Footwear industry.

2323	Fashion, Industrial and Jewellery Designers	232311	Fashion Designer
2323	Fashion, Industrial and Jewellery Designers	232312	Industrial Designer
2323	Fashion, Industrial and Jewellery Designers	232313	Jewellery Designer
3931	Canvas and Leather Goods Makers	393111	Canvas Goods Fabricator
3931	Canvas and Leather Goods Makers	393112	Leather Goods Maker
3931	Canvas and Leather Goods Makers	393113	Sail Maker
3931	Canvas and Leather Goods Makers	393114	Shoemaker
3932	Clothing Trades Workers	393200	Clothing Trades Workers
3932	Clothing Trades Workers	393211	Apparel Cutter
3932	Clothing Trades Workers	393212	Clothing Patternmaker
3932	Clothing Trades Workers	393213	Dressmaker or Tailor
3932	Clothing Trades Workers	393299	Clothing Trades Workers nec
3933	Upholsterers	393311	Upholsterer
7116	Sewing Machinists	711611	Sewing Machinist
7117	Textile and Footwear Production Machine Operators	711711	Footwear Production Machine Operator
7117	Textile and Footwear Production Machine Operators	711712	Hide and Skin Processing Machine Operator
7117	Textile and Footwear Production Machine Operators	711713	Knitting Machine Operator

7117	Textile and Footwear Production Machine Operators	711714	Textile Dyeing and Finishing Machine Operator
7117	Textile and Footwear Production Machine Operators	711715	Weaving Machine Operator
7117	Textile and Footwear Production Machine Operators	711716	Yarn Carding and Spinning Machine Operator
7117	Textile and Footwear Production Machine Operators	711799	Textile and Footwear Production Machine Operators nec
8115	Laundry Workers	811511	Laundry Worker (General)
8115	Laundry Workers	811512	Dry Cleaner
8115	Laundry Workers	811513	Ironer or Presser
8399	Other Factory Process Workers	839914	Fabric and Textile Factory Worker
8399	Other Factory Process Workers	839917	Hide and Skin Processing Worker

Source: ABS publication 1220.0 - ANZSCO -- Australian and New Zealand Standard Classification of Occupations, 2013, Version 1.2