



**Textiles, Clothing and Footwear
Industry Reference Committee**

MST Textiles Clothing and Footwear Training Package

Four Year Work Plan

September 2016

Prepared by
Manufacturing Skills Australia

Contents

A. Administrative information.....	5
B. Sector overview.....	5
<i>Textiles, Clothing and Footwear - Snapshot of the industry.....</i>	<i>5</i>
<i>Business numbers and size.....</i>	<i>7</i>
<i>Cotton ginning.....</i>	<i>10</i>
<i>TCF services.....</i>	<i>10</i>
<i>Licensing, regulatory or industry standards.....</i>	<i>11</i>
<i>Challenges and opportunities in the sector/sub-sector at the international/national/jurisdictional or regional level.....</i>	<i>12</i>
<i>Challenges.....</i>	<i>12</i>
<i>Opportunities.....</i>	<i>13</i>
<i>Laundry and dry cleaning.....</i>	<i>14</i>
C. Employment.....	15
<i>Employment outlook.....</i>	<i>15</i>
<i>Workforce supply-side challenges and opportunities.....</i>	<i>15</i>
<i>Additional information.....</i>	<i>17</i>
<i>IRC analysis.....</i>	<i>18</i>
<i>IRC analysis.....</i>	<i>19</i>
D. Skills outlook.....	21
<i>International and national trends.....</i>	<i>21</i>
<i>Generic workforce skills.....</i>	<i>22</i>
E. Other relevant skills-related insight for this sector.....	23
F. Training Product Review Plan – 2016-2020.....	24
<i>Items identified as time critical and included in the priorities for 2016-17.....</i>	<i>24</i>
<i>Items identified for the 2017-2020 plan.....</i>	<i>24</i>
G. IRC Signoff.....	27
IRC Training Product Review Plan 2016-17 – 2019-2020.....	28

Manufacturing Skills Australia acknowledges the financial and other support provided by the Department of Education and Training to support the National Training System.

A. Administrative information

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

Four Year Work Plan prepared by: **Manufacturing Skills Australia**

B. Sector overview

Textiles, Clothing and Footwear - Snapshot of the industry

The Australian Textiles, Clothing and Footwear (TCF) industry covers a range of sectors that can be described in three broad categories:

- sectors which process natural and synthetic materials, such as early stage wool processing, cotton ginning, hide, skin and leather
- production sectors – clothing production, textile production, footwear production, leather goods production and technical textiles
- service sectors – dry cleaning operations, laundry operations and footwear repair.

There were 13,017 businesses operating in the TCF industry and related services at the end of June 2015. Services made up 48% of businesses¹. The major hubs for the TCF industries are located in Victoria and New South Wales with nearly two thirds of all businesses in those two states. The only other states making a significant contribution is Queensland and Western Australia.² Cotton ginning and wool scouring are the only sectors to not follow this trend. 60% of the cotton ginning industry is in New South Wales and the other 40% in Queensland.³ With wool scouring, Victoria is home to the majority of the sector with 77% of businesses located in that state. New South Wales is the only other state with wool scouring businesses. The majority of TCF enterprises are micro and small operators employing less than 20 people.⁴

There are 23 qualifications in the MST Textiles, Clothing and Footwear Training Package ranging from Certificate II to Advanced Diploma level.

- MST20116 Certificate II in Production Support
- MST20216 Certificate II in Production Operations
- MST20316 Certificate II in Leather
- MST20416 Certificate II in Laundry Operations
- MST20516 Certificate II in TCF Service and Repair
- MST20616 Certificate II in Applied Fashion Design and Technology
- MST30116 Certificate III in Clothing and Textile Production
- MST30216 Certificate III in Manufactured Textile Products
- MST30316 Certificate III in Millinery
- MST30416 Certificate III in Footwear
- MST30516 Certificate III in Leather Production

¹ Australian Bureau of Statistics, 2016, *Counts of Australian Businesses, including exits and entries, 2014-15*

² Department of Employment, 2015, *Industry Outlook: Manufacturing*, pg. 4

³ IBISWorld, 2015, *Cotton Ginning in Australia*

⁴ Australian Bureau of Statistics, *Ibid*

- MST30616 Certificate III in Laundry Operations
- MST30716 Certificate III in Dry Cleaning Operations
- MST30816 Certificate III in Applied Fashion Design and Technology
- MST40116 Certificate IV in Textile Design and Technology
- MST40216 Certificate IV in Clothing Production
- MST40316 Certificate IV in Custom Made Footwear
- MST40416 Certificate IV in Millinery
- MST40516 Certificate IV in Applied Fashion Design and Merchandising
- MST50116 Diploma of Applied Fashion Design and Merchandising
- MST50216 Diploma of Textile Design and Development
- MST60116 Advanced Diploma of Applied Fashion Design and Merchandising
- MST60216 Advanced Diploma of Textile Design and Development

Note: The MST Training Package was approved by the Australian Industry and Skills Committee at its meeting on June 16, 2016. The IRC has referred two qualifications (LMT31909 Certificate III in Engineering – TCF Mechanic and LMT30307 – Certificate III in Cotton Ginning) from the LMT07 Training Package to the Manufacturing and Engineering IRC for inclusion in the MEM Training Package.

Information is gathered using the Australian and New Zealand Standard Industrial Classification (ANZSIC) system which was reviewed in 2006. The Textiles, Clothing and Footwear industries are classified in the following subdivision in:

Division C:

- Subdivision 13 – Textile, Leather, Clothing and Footwear Manufacturing

The industries also include:

- Class 9531 – Laundry and Dry Cleaning Services in Division S – Other Services;
- Class 9491 - Clothing and Footwear Repair
- Fashion Design Service and Textile Design Service from class 6924 – Other Specialised Design Services in Division M – Professional, Scientific and Technical Services; as well as
- Class 0521 – Cotton Ginning in Division A – Agriculture, Forestry and Fishing Support Services⁵

Unless otherwise stated the data included is only for the ANZSIC subdivision listed above.

Despite the gloomy predictions of the demise of the Australian industry, stakeholders report that the industry “is vibrant and rapidly growing/changing”. Indications are that the future of the industry is in niche markets, Australian labels, innovation, technology and new design directions. The industry offers exciting opportunities for technical and skilled workers with high level skills in production, design and supply chain management, as well as online marketing.

⁵ Australian Bureau of Statistics *Australian and New Zealand Standard Industrial Classifications 2006*

Business numbers and size

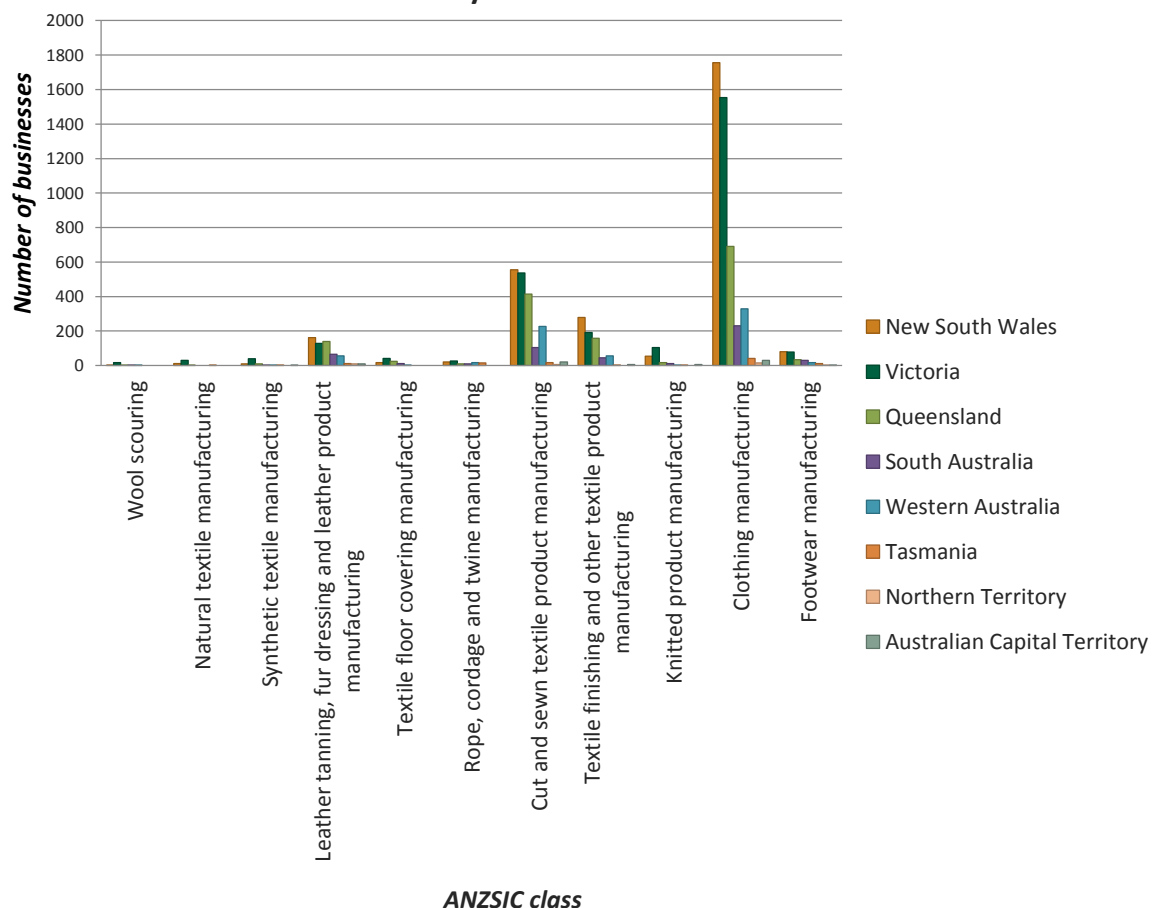
At the end of the 2008-09 Financial Year there were 8,702 businesses operating within the TCF industries. The largest number of businesses (4,646) were in the Clothing manufacturing sector. There were a further 705 businesses providing clothing and footwear repair services and 3,878 businesses operating as laundries and dry cleaners. Cotton ginning accounted for 24 businesses.⁶

Although New South Wales had a significantly lower level of employment for this sector, it was the state with the largest number of businesses (2,949).

The majority of businesses were either non-employers (that is, they hadn't submitted an Income Tax Withholding (ITW) statement to the Australian Tax Office (ATO) for five consecutive years) or small businesses employing between 1 – 19 people.⁷

Note: *Businesses have been classified according to the number of employees.*

**Textiles, clothing and footwear manufacturing industries
Australia
Business numbers by ANZSIC class and state June 2009**



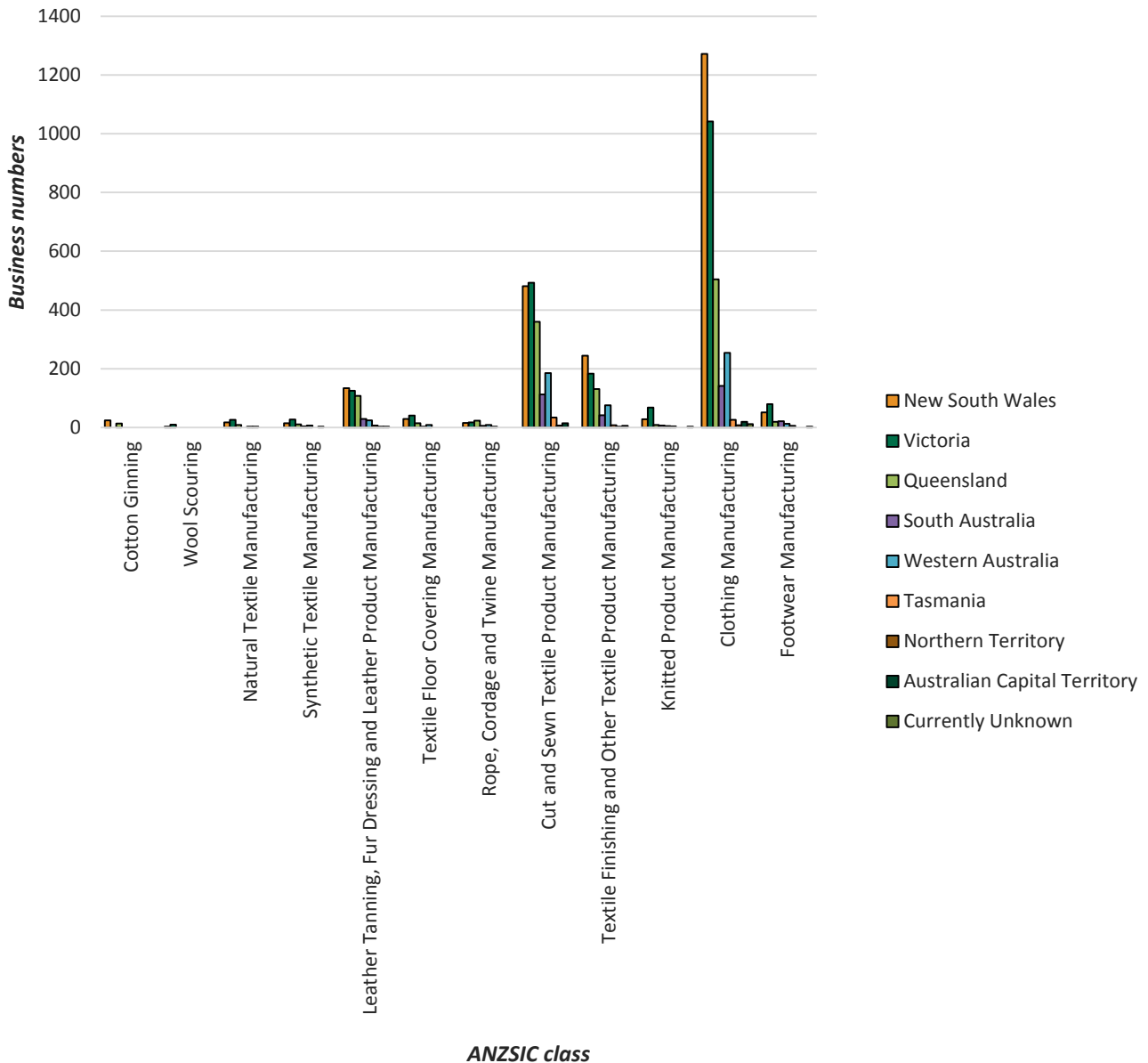
Source: ABS Counts of Australian Businesses 2008-09

⁶ Australian Bureau of Statistics *Counts of Australian Businesses 2008-09*

⁷ Australian Bureau of Statistics *Counts of Australian Businesses 2008-09*

By the end of the 2014-15 Financial Year, Clothing manufacturing continues to have the largest number of businesses in the sector. However the number of businesses has decreased by 29% (1,352 businesses) since 2009. New South Wales had the most number of TCF manufacturing businesses (2,315), down from 2,949 in 2009.⁸

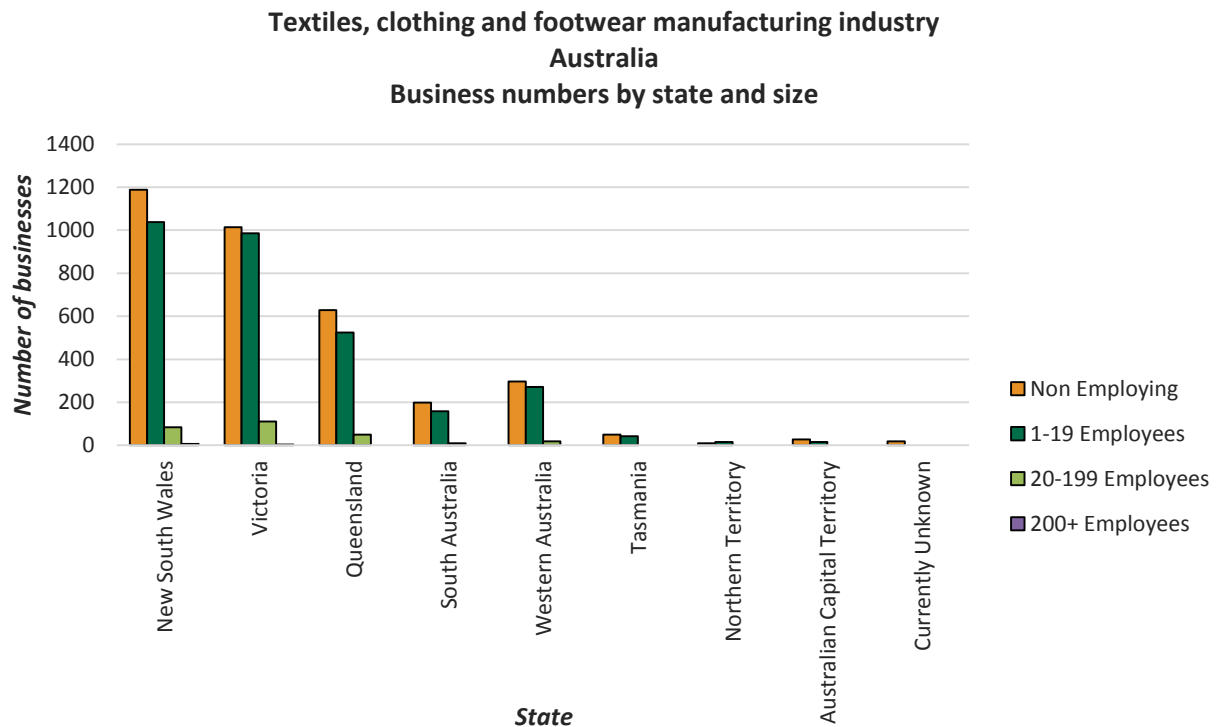
**Textiles, clothing and footwear manufacturing industries
Australia
Business numbers by ANZSIC class and state June 2015**



Source: ABS Counts of Australian Businesses June 2015

⁸ Australian Bureau of Statistics, 2010, *Counts of Australian Businesses including entries and exits, 2008-09*; Australian Bureau of Statistics, 2016, *Counts of Australian Businesses including entries and exits, 2014-15*

In June 2015, micro and small businesses (that is with less than 20 employees) continue to dominate the industry. According to the ABS⁹, over 95% of businesses were in this category. Only nine businesses employed 200+ people and they were located in New South Wales and Victoria.



Source: ABS Counts of Australian Businesses June 2015

There are very few large manufacturers in this industry group remaining in Australia. Exceptions include Australian icons such as Driza-Bone and R.M. Williams. However only a small part of their manufacturing takes place in Australia. Cue¹⁰ and Seafolly both continue to manufacture the majority of their products in Australia. Akubra continues to make all its product in Australia and with the announcement in the Defence White Paper of an extra 5,000 troops to join the Australian Defence Force¹¹, there is significant opportunity ahead for the company. There are many small companies that manufacture in Australia and are also exporting internationally – companies such as Draggin’ Jeans, Nobody Jeans and Jets Swimwear.

⁹ Australian Bureau of Statistics, 2016, *Counts of Australian Businesses including entries and exits, 2014-15*

¹⁰ McEwing, F, 2016, Cue: insider secrets from our founder, *Ragtrader*, June 29, <http://www.ragtrader.com.au/business/cue-insider-secrets-from-our-founder>

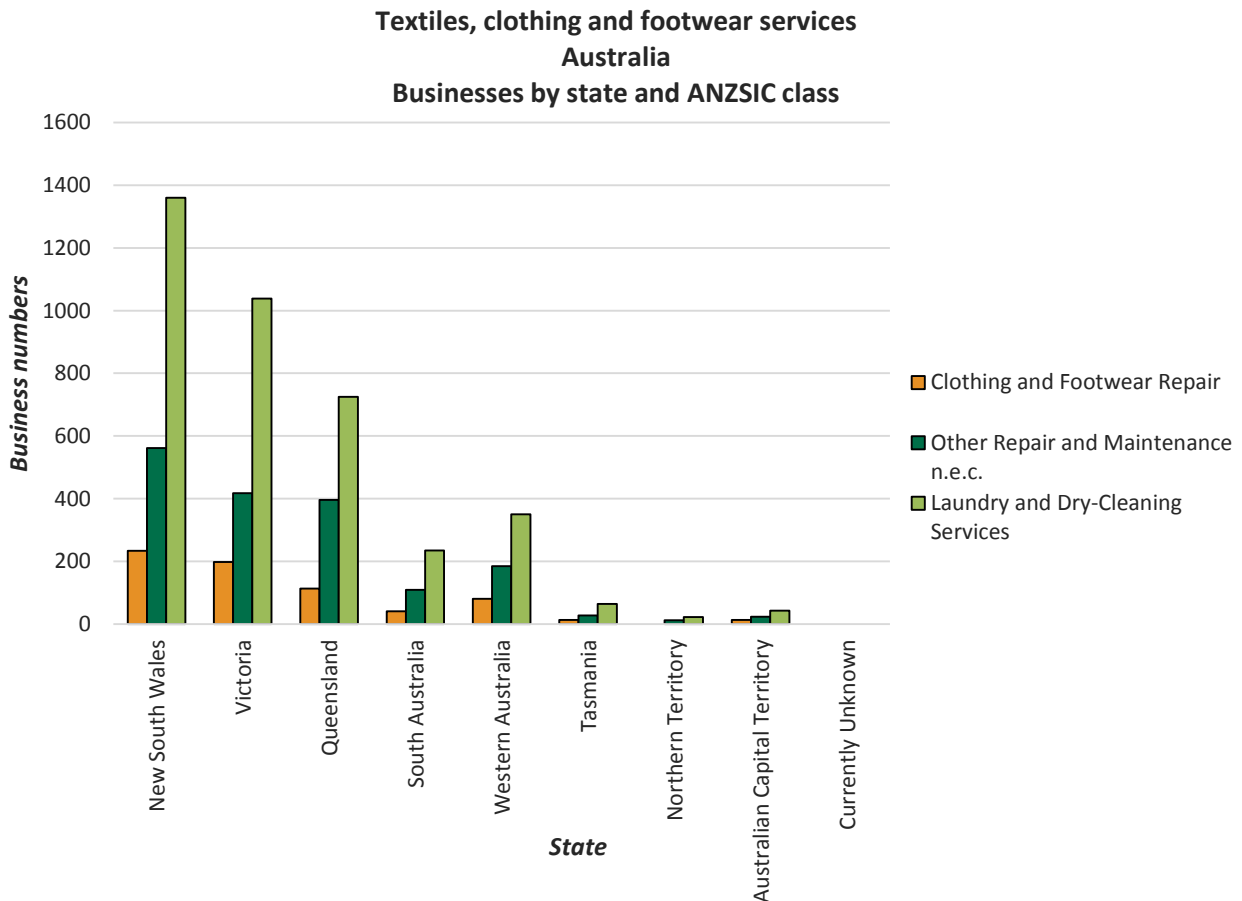
¹¹ Department of Defence, *2016 Defence White Paper*, <http://www.defence.gov.au/WhitePaper/>

Cotton ginning

The cotton ginning industry has been impacted in recent years by drought/climate change as well as the ongoing Murray-Darling Basin water management process. There are three major players in this sector – Namoi Cotton Co-operative; Olam Investments (Queensland Cotton) and LDC Enterprises. Only Namoi Cotton Co-operative is Australian owned and operated. Increasing wage levels in China and increasing demand from Asian nations such as Pakistan, Bangladesh and Vietnam are predicted to see this sector’s revenue grow along with an increase in employment.¹² The majority of workers in the cotton ginning industry are seasonal. Increasing production will see the ‘season’ extend to encompass almost the full 12 months.

TCF services

TCF services remain strong. In 2015, there were 6,258 businesses providing a range of TCF services. This is down slightly (4% or 271 businesses) from June 2009. Laundry and dry cleaning services are the largest sector with 3,837 businesses operating at the end of June 2015.¹³



Source: ABS Counts of Australian Businesses June 2015

¹² IBISWorld, 2015, *Cotton Ginning in Australia*

¹³ Australian Bureau of Statistics, 2016, *Counts of Australian Businesses including entries and exits, 2014-15*

Licensing, regulatory or industry standards

There are no general licensing requirements in the TCF sectors, however specific licenses may be required in some jobs.

Local regulations should be checked for details as the industry is generally subject to a range of regulatory controls. These vary with the nature of the facility and to some extent on its location, as most regulations are State-based and many are enforced by local government. The training package allows for these differences without mandating them to specific units of competency which would not be appropriate.

The manufacture of children's apparel and accessories is covered by industry guidelines to which suppliers of these products are held responsible¹⁴.

The Australian and New Zealand standards relating to infection control in health care settings are relevant to the laundry practices servicing the likes of hospitals and aged care facilities. This standard is AS/NZS 4146: 2000 for Laundry Practice.

¹⁴ National Retail Association, 2015, *Children's Apparel & Accessories Product Safety Guidelines*. <http://www.nra.net.au/wp-content/uploads/2015/06/Children-s-Apparel-Accessories-Product-Safety-Guidelines-Apr-2015-.pdf>

Challenges and opportunities in the sector/sub-sector at the international/national/jurisdictional or regional level

For this section the following potential challenges and opportunities facing the TCF industries have been identified by stakeholders.

Challenges

- Trans Pacific Partnership and Free Trade Agreements
- Changes to national and international standards and codes of practice
- Sustainability/recycling/ethical clothing
- The Australian dollar
- Robotics and automation
- VET reform/privatisation/changes to TAFE
- Lack of suitably skilled workers versus qualified people/reluctance of employers to induct graduates and develop them further to production/workplace ready
- Legislation/regulation
- Local procurement policies by government agencies
- Nanotechnologies
- Global supply chain management from design, manufacture and logistics
- STEM skills
- China vs India
- Continuing challenge of language, literacy and numeracy (LLN) for the workforce
- Energy conservation

For some sectors of the industry, such as laundry and dry cleaning, there are some specific challenges facing the industry, such as:

- The rising use of subcontractors who employ contract labour and therefore do not train
- The privatisation of government linen services, especially in New South Wales
- Lack of understanding of and compliance with Australian/New Zealand Laundry practice standard¹⁵ within the industry
- Safe chemical handling and waste disposal within the dry cleaning industry
- Employment of unskilled staff and university students with no sustainability plan for the industry

¹⁵ SAI Global, 2000, *AS/NZS 4146:2000 Laundry practice* <http://110.175.94.82:83/Documents/AS%20NZS%204146-2000%20Laundry%20Practice.pdf>

Opportunities

- design led resurgence of unique Australian fashion labels
- 3D printing/additive manufacturing
- Advanced manufacturing/advanced materials
- Sustainability/recycling/ethical clothing
- Reshoring/off shore production costs on the rise
- Defence White Paper
- Trans Pacific Partnership (TPP) and Free Trade Agreements (FTA)
- Nanotechnologies

The industry sees certain areas as posing both challenges and opportunities. For example the Trans-Pacific Partnership (TPP) and the recently signed Free Trade Agreements (FTAs) are considered to pose a challenge to the industry through increased competition from ‘low-cost’ economies. They also offer opportunities through access to new markets, especially in China as it shifts to more of a ‘consumer’ focussed economy. India is similarly seen as a potential opportunity for the same reason.

Another area that is seen as both a potential challenge and opportunity is new technologies such as nanotechnology, wearable technologies and additive manufacturing. Concern was raised by stakeholders on issues of toxicity around nanotechnologies and additive manufacturing, especially when used in developing new, advanced materials for the ‘wearables’ sector. Titanium and manganese were two materials used in additive manufacturing that stakeholders expressed concern about. However the industry sees wearable technologies as potentially a major growth opportunity.¹⁶

Rising employment costs in China are seeing some companies bring some of their manufacturing back home. While this trend is greatest in the United States (US) with over 140,000 jobs in manufacturing returning in 2014¹⁷, we are seeing some examples of that occurring in Australia with Supre reshoring some of its manufacturing. This provides local manufacturers opportunity to compete on a more equal basis in the domestic market. It also opens up employment opportunities for Australian garment workers and designers.

At the same time India is promoting its manufacturing credentials through its “Make in India” policies which reflects the Indian government’s belief that manufacturing underpins their ongoing economic growth. The ‘Make in India’ policies pose a significant challenge to Australian TCF manufacturers through their drive to entice international manufacturers to design and manufacture in India.¹⁸

The industry is seeing a resurgence in unique Australian brands led by innovative design. These strong new labels partner with makers locally in the early years and the industry reports seeing more of the established brands looking to local manufacturing for parts of their ranges. Unique design and strong businesses will drive value in the end product, which has synergies with local make.

In addition, stakeholders support the development of a fashion accessories stream in the Fashion Design and Technologies qualifications as any business today needs to leverage off multiple industry streams to remain competitive.

¹⁶ Kosir, S, 2015, A Look at Smart Clothing for 2015, *Wearable Technologies* 23 March 2015, <https://www.wearable-technologies.com/2015/03/a-look-at-smartclothing-for-2015/>

¹⁷ Reshoring Initiative, (n.d.), *Reshoring Initiative Data Report: Reshoring and FDI Boost US Manufacturing in 2014*, http://www.reshorennow.org/content/pdf/2014_data_summary.pdf

¹⁸ Make in India program, <http://www.makeinindia.com/about>

The TCF industry continue to be challenged by low levels of language, literacy and numeracy (LLN) and Foundation Skills. Stakeholders have reported that many production workers do not have English as their first language. For example RM Williams have a largely Vietnamese workforce on their production lines who communicate mainly in Vietnamese via a supervisor who is bilingual. Problems arise when the supervisor is absent and the workers and management need to communicate with each other. This leads to safety issues and may lead to the need to close a production line. Such scenarios are common across the industry.

Laundry and dry cleaning

Within the laundry and dry cleaning industry, opportunities exist in skilling unemployed people, especially the long-term unemployed, and providing them introduction into specialised industries such as health care, aged care and hospitality.

The dry cleaning sector has also identified low levels of LLN and Foundation Skills as a challenge. The sector is dominated by micro and small businesses, many owned and run by people who are not proficient in English and also lack the skills and experience to manage a dry cleaning business. The sector has expressed concern around the management of toxic chemicals and other environmental safety issues as a result of poor English language skills.

The laundry sector is moving towards improving standards by adopting a Code of Practice and implementing the AS/NZS 4146:2000 Laundry practice standard. The Code of Practice will see the implementation of quality practices and auditing processes for member businesses. Both laundry and dry cleaning sit within the TCF industry, yet they are an integral component in many others such as health care, aged care, hospitality and mining. Laundries service many aspects of the hospitality sector including hotels, conference venues, cruise ships and restaurants. Linen is outsourced to a range of facilities including commercial laundries, correctional facilities and Australian Disability Enterprises (ADEs). Yet training of staff to a standard as represented by national qualifications is seen by employers as either unnecessary or of little benefit. This is despite the high risk to the public's health if the correct protocols are not followed or enforced.

C. Employment

Employment outlook

In the five years to February 2015, employment in the TCF manufacturing industry fell by 11,300 people or approximately 14%.¹⁹ It is expected that this trend will continue in the near term. However sectors of the industry are finding it difficult to recruit experienced, trained workers in production areas. Stakeholders stated that they would rather employ skilled labour rather than higher education qualified people.

Specialist skills such as TCF mechanic skills are in demand. Nationally there is a shortage of mechanics that can maintain and repair commercial and/or domestic sewing machines. Australia's largest supplier of sewing and embroidery machines trains its own mechanics so as to meet customer needs.

Workforce supply-side challenges and opportunities

Stakeholders identified synergies between sectors in the textile, clothing and footwear industry and several other industries. One area in which most stakeholders could see synergies was in the design sector and other manufacturing industries. All acknowledged that design skills had a role to play in all manufacturing industries. There were also synergies within sectors, with the laundry and dry-cleaning services sector identifying synergies between laundries and dry-cleaning operations in the mining/resources sector, the hospitality sector (including cruise ships), beauty industry, etc. The sector also has the potential to offer employment opportunities for people with disabilities through skills development in basic skills such as clothes sorting, washing, drying and ironing skills.

Another area of synergy identified by stakeholders was between clothing production and specific sectors of the furnishing industry, such as canvas and sail making, upholstery, vehicle trimming and soft furnishing.

The TCF industry is unusual in that employers seek workers who are trained before entering the industry. There is a perception within the industry that graduates need to spend time in a workplace before they can be seen as productive employees. Many employers are micro enterprises made up of only one or two people and therefore do not have either the time or inclination to provide on-the-job training for graduates. This makes gaining industry experience difficult for graduates. The industry wants people who can "make product" not just designers or sample makers. Stakeholders in New South Wales have reported an increase in "reshoring" of manufacturing with one manufacturer reporting that several well-known Australian brands had recently brought 40% of their manufacturing back to Australia.

The industry identified that the lack of training within the industry was hampering recruitment and making it difficult to attract new people to the industry. The TCF industry has been slow to take advantage of the National Training System and industry stakeholders are concerned that low training uptake will lead to a shortage of trade level sewing machinists. There is a need to develop an industry-wide TCF Training Strategy that incorporates workplace delivery and assessment with the integration of LLN.

Within the laundry services sector there is a need to provide employment direction into different areas where growth is possible. The sector is changing direction and growing. However there is little recognition of such. While health and the hotel sector have been the traditional users of commercial laundries via outsourcing arrangements, the growth is in demand for workers with laundry skills in the aged care industry

¹⁹ Department of Employment, 2015, *Industry Outlook: Manufacturing*, p. 3

and the fly in fly out/mining camp sector. Another sector in which growth is being seen is providing linen services to the burgeoning cruise ship sector. The demand in these sectors can be quite specific and the impact on skill needs is yet to be evaluated.

Throughout the industry, stakeholders reported that there is a need for workers who are multi-skilled and able to respond flexibly to changing market conditions. This includes skills in consumer relationship management, problem solving, teamwork skills, and STEM skills such as critical analysis and process thinking.

When looking at the availability of training for the TCF sector, coverage and scope varies greatly depending on the qualification. The qualifications with greater coverage are Applied Fashion Design and Technology, Clothing Production, and Laundry Services, all of which have multiple RTOs with qualifications on scope across all levels. Many of the other qualifications are on scope at only one or two RTOs, including Textile Production/Fabrication/Design, Cotton Ginning, Footwear Production/Repair/Custom, as well as the Certificate IV in Laundry Operations and Supervision. The RTOs predominately with these qualifications on scope are private and Adult Community Education sectors or Industry Associations.

The following Qualifications currently have no RTOs on scope and zero enrolments over the past 5 years (except for one):

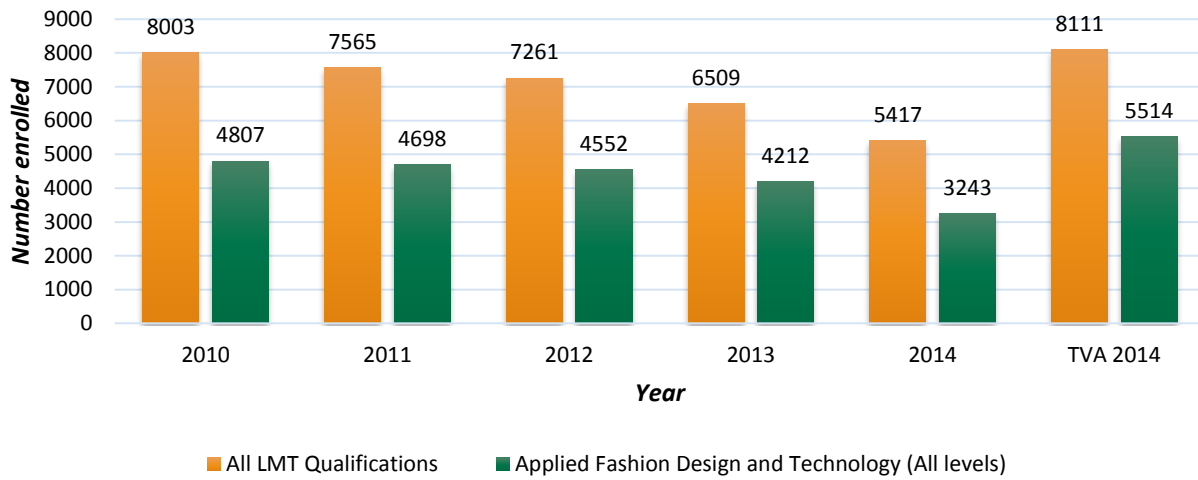
- Certificate II in Footwear Production (Intermediate)
- Certificate II in Footwear Production (Complex or Multiple Processes)
- Certificate II in Technical Textiles and Non-wovens
- Certificate IV in Supply and Fitting of Pre-manufactured Medical Grade Footwear
- Diploma of Medical Grade Footwear
- Diploma of Textile Technology and Production Management (had eight enrolments in 2010)

Over the past five years, the total number of enrolments in qualifications from the LMT Training Package have been declining, as demonstrated in the chart below. These enrolments were all in publically funded institutions except for the Total VET Activity (TVA) data which includes fee-for-service enrolments. With initial TVA data only just available as of 2014, we can see that the shortfall is made up for by enrolments in private institutions. Even so, of the 2,694 fee-for-service enrolments in 2014, 84% of these (2,271) were in Applied Fashion Design and Technology Qualifications. The remaining fee-for-service enrolments were primarily in Laundry Operations and Dry Cleaning Operations.

This chart also demonstrates the large proportion of the total enrolments that are made up of those in Applied Fashion Design and Technology.

Note: Data is for LMT05 as the MST Training Package has just obtained approval.

Enrolments in Qualifications from the LMT Training Package

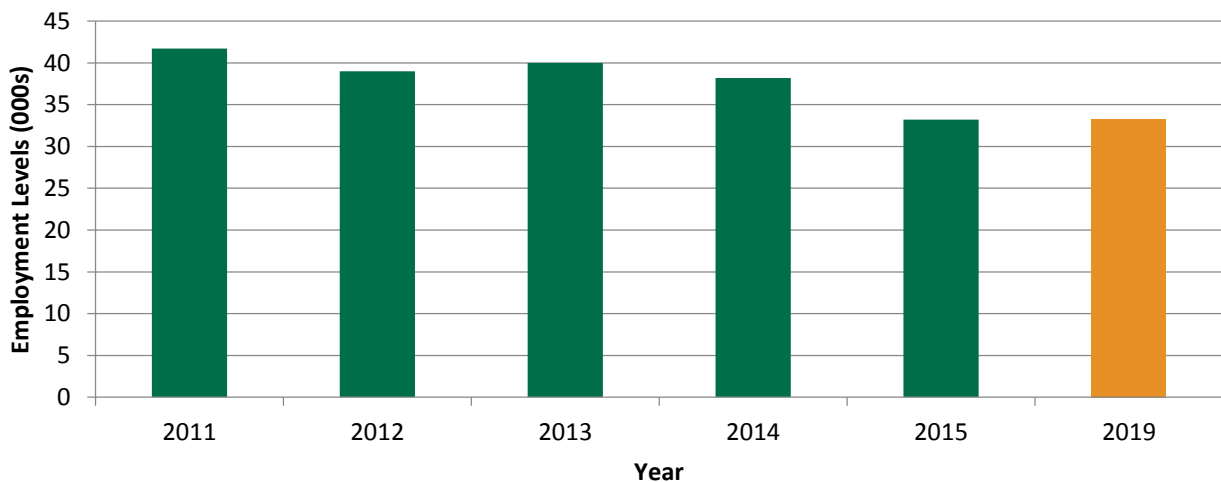


Source: VOCSTATS, *Program enrolments 2003-2014*. <http://www.ncver.edu.au/resources/vocstats.html>. Extracted on 05/04/16

Additional information

The following graphs have been supplied by the Department of Education and Training. The Department has sourced national occupation-related data from the Department of Employment and the Australian Bureau of Statistics to inform the work of the IRCs.

Textile, Leather, Clothing and Footwear Manufacturing – Employment Levels (000s)²⁰



Source: Department of Employment Labour Market Information Portal

²⁰ Note: Figures are displayed at the ANZSIC Division level 13. The graph includes current and historical employment levels, as well as a projected employment level to 2019

IRC analysis

The Department projects stable employment levels to 2019 within the Textile, Leather, Clothing and Footwear Manufacturing sector. With the reported growth in specialist, Australian made garments reported by stakeholders, the strength in garment production in Australia is in small businesses with less than 20 employees. This sector is also strengthened by the laundry and dry cleaning operators who continue to be of great need as Australia builds its strength in service delivery.

Key Occupations – Employment Levels (000s)²¹



Source: Australian Bureau of Statistics (ABS)

Key Occupations – Historical and Projected Employment Growth (%)²²



Source: Historical employment growth from the Australian Bureau of Statistics (ABS) and projected employment growth from the Department of Employment.

IRC analysis

Data provided in the graphs above represent five Key Occupations as determined by the Department of Employment. These occupations are a very small selection of occupational outcomes from the MST Training Package. The following table provided by MSA to the IRC uses Occupational Projections made by the

²¹ Note: Occupations are at the four digit ANZSCO code. Employment levels are the five year annual average to 2015. Figures include all employed in the occupation across the economy, not just the relevant industry.

²² Note: Occupations are at the four digit ANZSCO code. The historical employment is the five year growth rate to 2015 and the projected employment growth rate is the expected growth rate to 2019. Rates are based on figures that include all employed in the occupation across the economy, not just the relevant industry.

Department of Employment²³. It more accurately reflects the Key Occupational outcomes of training for qualifications from the MST Training Package as identified by stakeholders.

The occupations ‘Sales Representatives’ and ‘Advertising, Public Relations and Sales Managers’ may be represented in the Textiles, Clothing and Footwear sector, but the skills required for these occupations are not reflected in the MST Training Package. The occupation ‘Other cleaners’ represents carpet and pool cleaners²⁴ who are not representative of training outcomes from the MST Training Package.

Dry cleaning and laundry occupations are covered by ANZSCO code 8115, representing the single largest group of employed persons with training directly related to the MST Training Package. This group represents:

- 811511 Laundry Worker (general)
- 811512 Drycleaner
- 811513 Ironer or Presser

Note: while every effort has been made to accurately represent the occupational outcomes from qualifications in the MST Training Package, MSA are limited by the data being presented at the four digit code level. For example, the table below includes ‘Group 2323 Fashion, Industrial and Jewellery Designers’, when the only appropriate occupation from this group is 232311 Fashion Designer.

Occupation Code	Occupation	Employment level - November 2015 ('000)	Department of Employment Projections		
			Projected employment level - November 2020 ('000)	Projected employment growth - five years to November 2020	
				('000)	(%)
2323	Fashion, Industrial and Jewellery Designers	11.6	13.3	1.7	14.9
3932	Clothing Trades Workers	6.7	5.5	-1.2	-17.6
7116	Sewing Machinists	7.7	4.9	-2.8	-36.3
8115	Laundry Workers	13.6	13.8	0.3	1.9

Source: Department of Employment, Occupation projections.

Technical errors with the graphs presented by the Department are also apparent. In the graph titled ‘Key Occupations – Employment levels (‘000’s)’ the vertical axis is labelled as a percentage, despite the title referencing values in thousands. In the graph titled ‘Key Occupations – Historical and Projected Employment Growth (%)’ the legend (series labels) have not been identified correctly with the values they represent (i.e. historical and projected).

²³Department of Employment, 2016, Labour Market Information Portal, *Employment Projections*

<http://lmip.gov.au/default.aspx?LMIP/EmploymentProjections>

²⁴ ANZSCO, 2013. Australian and New Zealand Standard Classification of Occupations, 2013.

<http://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/64469DDCDA34190CA257B9500131042>

D. Skills outlook

International and national trends

Both internationally and nationally, the industry is seeing an increasing cross-over between manufacturing and design. The use of laser cutting techniques in the fashion industry is seeing a growth in the call for computer aided drafting (CAD) skills. The industry is becoming more global as Australian designers are gaining international recognition for high end fashion. This is driving a need for second language skills at management level.

New materials, sustainable production methods, ethical clothing products and recycling are all trends that making an impact. Bespoke and custom fit products²⁵, designing and manufacturing for medical conditions and recuperative clothing are also trends that are impacting the industry.

Another trend both in Australia and internationally that has potential to revolutionise the industry is wearable technology or 'smart clothing'.²⁶ The majority of smart clothing is being developed for the sports industry, however applications are also being developed for the health industry. With 2016 being an Olympic Games year, it is expected that there will be a growth in smart clothing products released.

Top priorities for the industry identified by the IRC are:

- the need to continue to train trade level sewing machinists and to improve, maintain and build capability in the production workforce at the Certificate II Production Operation skills, including
 - Sample Machining Skills
 - Repair and mending skills particularly in laundry sector
 - Custom made and alterations skills

A large percentage of industry is small business and if they cannot source good production workers they are forced to undertake those duties themselves. The effect of shortages on business is substantial. With limited expertise in sewing, tailoring and mending, the cost of production increases without proportionate increase in efficiency. Business is restricted in its ability to grow and innovate and eventually this has a shrinking effect on the industry.

- design skills for business, i.e., real commercial led design
- small business skills including
 - skills for using social media as a marketing tool e.g. understanding the platforms, skills to support creative thought and planning for staged/professional photos and posts on Instagram and Facebook; website design including online shopping functions
 - skills to implement the legislated labour and employment requirements and ethical labour standards
 - supply chain management including understanding of and collaboration across the supply chain both locally and globally and the skills to implement the legislated labour and employment requirements and ethical labour standards within the supply chain

²⁵ Evans, S, 2016, 3D printed human torso suits online clothing disrupter Tailors Mark, *Australian Financial Review*, September, 6, <http://www.afr.com/business/retail/fmcg/3d-printed-human-torso-suits-online-clothing-disrupter-20160830-gr4p74#ixzz4JPopR138>

²⁶ Cochrane, N, 2014, Meet 10 Aussies start-ups riding the boom in wearable technology, *Australian Financial Review*, June 19, <http://www.afr.com/it-pro/meet-10-aussie-startups-riding-the-boom-in-wearable-technology-20140618-jy9nh>

- clothing, various technical skills including:
 - Computer aided design, new technologies and fabrics
- Workplace Language Literacy and Numeracy skills across the levels but particularly at Certificate II and Certificate III and IV levels in all sectors.

The five most important skills for the sectors workforce within the next three to five years.

Rank	Skill	How identified
1	Trade level skills for sewing machinists and ongoing upskilling of production workforce	Industry consultations
2	Design skills for business	Industry consultations
3	Small business skills	Industry consultations
4	Technical skills for the clothing industry	Industry consultations
5	LLN	Industry consultations

Generic workforce skills²⁷

Ranked from 1 being the most important, to 12 being the least important.

1	Managerial / Leadership
2	Entrepreneurial
3	Customer service / Marketing
4	Design mindset / Thinking critically / System thinking / Solving problems
5	Environmental and Sustainability
6	Technology
7	Communication / Virtual collaboration / Social intelligence
8	STEM
9	LLN
10	Learning agility / Information literacy / Intellectual autonomy and self-management
11	Financial
12	Data analysis

²⁷ Pre-populated table supplied by the Department of Education and Training

E. Other relevant skills-related insight for this sector

Accessing workers with the correct combination of technical skills remains a key priority for the industry. The proliferation of micro and small employers has resulted in a reluctance to train on the job, largely because employers are time-poor and focused on the business. This is leading to a shortage of people with the necessary technical skills and experience. This issue has been highlighted by stakeholders throughout all the consultations undertaken and concern raised that if the situation is not addressed, the industry will be impacted and shrink even further.

Additive manufacturing (3D printing) is also expected to impact the industry significantly in the next five to ten years. While prototypes of 3D printed clothing are already being produced, there are still issues around comfort and movement of the items produced.²⁸ This will drive the need for new skills in digital literacy and coding as well as knowledge of non-traditional materials such as polymer powders.

Consumers are looking for proof of ethical sourcing of materials and ethical treatment of workers. The development of skills to participate and manage global supply chains incorporating ethical clothing compliance, transparency and accountability is becoming crucial for the industry.

“Green credentials” are already impacting the industry. Another area in which consumers are driving changes to the industry is in the management of waste and resource, both at the production level and post-consumer.²⁹ As such, the industry is looking to improve its skills in this area.

Another key skill area for the industry is in the use of social media for marketing and promotion, especially for micro and small businesses. The increasing use of social media and e-commerce is also part of the international fashion industry and Australian TCF businesses are in danger of being left behind if they do not embrace these technologies. The current Certificate IV in Small Business Management (BSB42515) does not have any units around social media or web-based marketing. The industry requires a skill set that meets their specific needs to enable enterprises to compete in the global market place.

²⁸ Marriott, H, 2015, Are we ready to 3D print our own clothes? *The Guardian* 28 July 2015, <http://www.theguardian.com/fashion/2015/jul/28/are-we-ready-to-print-our-own-3d-clothes>

²⁹ Caulfield, K, 2009, *Sources of Textile Waste in Australia*, NACRO, <http://www.nacro.org.au/wp-content/uploads/2013/04/TEXTILE-WASTE-PAPER-March-2009-final.pdf>

F. Training Product Review Plan – 2016-2020

Stakeholders identified a range of training product items that need to be considered in the Training Product Review Plan. These include:

Items identified as time critical and included in the priorities for 2016-17

Fashion Design and Technology Qualifications - Business management stream within the Fashion Design and Technology qualifications:

- Business skills/small business skills
- Budget and finance
- E-commerce
- Social media
- Web based marketing

Dry-cleaning qualifications to be reviewed to include:

- Customer service skills
- Point of sale (POS) equipment
- New designs of equipment
- New solvents
- Chemical safety and disposal (and aligned with European Union (EU) standards)
- Using alternate/green solvents

Items identified for the 2017-2020 plan

Fashion and textiles – Advanced business skills

- Commercial-led design
- Global production management, boutique manufacturing skills, marketing and design research
- Legal skills in intellectual property rights and copyright
- Development of a new unit of Supply chain management to include Ethical Clothing Compliance, Transparency and Accountability

Fashion and textiles – technical skills

- Various technical skills for the clothing manufacturing sector, including;
 - Sample Machining Skills
 - Repair and mending skills particularly in laundry sector
 - Custom made and alterations skills
- Additional production units with the focus on CAD, laser cutting, and new technologies in 3D prototyping, new and emerging textile technology for performance fabrics, wearable technologies,
- development of skill sets to upskill existing workers in emerging trends and technologies (to incorporate STEM skills, problem solving, team work)
- The development of a fashion accessories stream within the Fashion Design and

Technology qualifications

- Explore the technical skills and knowledge required to process/work with new materials such as aramid fibres
- Higher level qualifications for:
 - Diploma of Millinery and Advanced Diploma of Millinery (currently available offshore via online courses)
 - Diploma of Footwear
 - Advanced pattern making and garment construction/pattern making and fit at AQF level 8
- Specialist pathways for:
 - Machinists
 - Pattern makers
 - Fitters
 - Presentation
 - Customer relationships
 - Buying (including sourcing)
 - Entrepreneurship (identifying opportunities)
 - Fashion styling
 - Further development of bespoke and custom fit units and pathway

Laundry and dry cleaning

The laundry sector has called for the development of:

- A Unit of Competency on compliance with Standards and the Code of Practice
- A Skill Set that serves both as an induction program for laundries as well as a pathway into Laundry and Dry Cleaning Qualifications
- Inclusion of content around chemical handling, especially Hydrogen Peroxide

Additionally, there is a need to develop Unit(s) of Competency or a Skill Set to meet the demand for mending and alteration skills within the laundry industry.

Exploring the direction that the Laundry and Dry-Cleaning sector is moving and the resulting impact on skill needs.

Industry wide

- Development and implementation of a TCF Training Strategy
- A complete review of the Training Package including the identification and removal of duplicate/non-required units and the addition of relevant non-machine units at Certificate II and Certificate III levels
- Consumer relationship management
- STEM skills
- Cross skilling
- Problem solving (needs to be better addressed in delivery of training and integrated into the technical training)

- Skills to work in a team (need to be better addressed in delivery of training and integrated into the technical training)

Stakeholders also acknowledged that the Training Package has just been reviewed and at the time of consultation, not yet approved. Therefore, much of this work was “premature” and it would be better to evaluate again in 12 months’ time when stakeholders had had time to work with the new Training Products.

G. IRC Signoff

This work plan was agreed as the result of a properly constituted IRC decision and was approved by the Chair David Giles-Kaye on 19 September, 2016.

IRC Training Product Review Plan 2016-17 – 2019-2020

Contact details: Manufacturing Skills Australia

Date submitted to Department of Education and Training:

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of Competency code	Unit of Competency name
IRC to recommend the most appropriate financial year in which to review the training product. E.g. 2016-2017	Note: The Department will pre-populate these fields					
2017-2020 (progressive)				<p><i>Fashion and textiles – Advanced business skills</i></p> <ul style="list-style-type: none"> • Commercial-led design • Global production management, boutique manufacturing skills, marketing and design research • Legal skills in intellectual property rights and copyright • Development of a new unit of Supply chain management to include Ethical Clothing Compliance, Transparency and Accountability <p><i>Fashion and textiles – technical skills</i></p> <ul style="list-style-type: none"> • Various technical skills for the clothing manufacturing sector, including <ul style="list-style-type: none"> ○ Sample machining skills ○ Repair and mending skills particularly in laundry sector ○ Custom made and alterations skills • Additional production units with the focus on CAD, laser cutting, and new technologies in 3D prototyping, new and emerging textile technology for performance fabrics, wearable technologies, • Explore the technical skills and knowledge required to process/work with new materials such as aramid fibres • Development of skill sets to upskill existing workers in emerging trends and technologies (to incorporate STEM skills, problem solving, team work) • The development of a fashion accessories stream within the Fashion Design and Technology qualifications 		

			<ul style="list-style-type: none"> • Higher level qualifications for: <ul style="list-style-type: none"> ○ Diploma of Millinery and Advanced Diploma of Millinery (currently available offshore via online courses) ○ Diploma of Footwear ○ Advanced pattern making and garment construction/pattern making and fit at AQF level 8 • Specialist pathways for: <ul style="list-style-type: none"> ○ Machinists ○ Pattern makers ○ Fitters ○ Presentation ○ Customer relationships ○ Buying (including sourcing) ○ Entrepreneurship (identifying opportunities) ○ Fashion styling ○ Further development of bespoke and custom fit units and pathway <p><i>Laundry and dry cleaning</i></p> <p>The laundry sector has called for the development of:</p> <ul style="list-style-type: none"> • A Unit of Competency on compliance with Standards and the Code of Practice • A Skill Set that serves both as an induction program for laundries as well as a pathway into Laundry and Dry Cleaning Qualifications • Inclusion of content around chemical handling, especially Hydrogen Peroxide • Additionally, there is a need to develop Unit(s) of Competency or a Skill Set to meet the demand for mending and alteration skills within the laundry industry. • Exploring the direction that the Laundry and Dry-Cleaning sector is moving and the resulting impact on skill needs. <p><i>Industry wide</i></p> <ul style="list-style-type: none"> • Development and implementation of a TCF Training Strategy • A complete review of the Training Package including the identification and removal of duplicate/non-required units and the addition of relevant non-machine units at Certificate II and Certificate III levels • Consumer relationship management • STEM skills
--	--	--	--

			<ul style="list-style-type: none"> • Cross skilling • Problem solving (needs to be better addressed in delivery of training and integrated into the technical training) • Skills to work in a team (need to be better addressed in delivery of training and integrated into the technical training) <p>Stakeholders also acknowledged that the Training Package has just been reviewed and at the time of consultation, not yet approved. Therefore, much of this work was “premature” and it would be better to evaluate again in 12 months’ time when stakeholders have had time to work with the new Training Products.</p>
--	--	--	---