

Report to the Project Governance Group for the Textiles, Clothing and Footwear Workforce Skills Mapping Project



Skills Insight acknowledges that First Nations peoples have been living on and caring for Country for thousands of years.

This is respected in our values and the way we work.





TextileWorks, a part of ForestWorks, is providing support for the management of this JSC project as part of our collaborative partnership with Skills Insight. ForestWorks has an enduring and strong connection working with the forestry, timber, paper, fibre and furnishing industries and have been engaged by Skills Insight to deliver this project in partnership.



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Executive summary

This report outlines the proposed framework and main components of the Textiles, Clothing and Footwear (TCF) Occupation and Skills Map, which aims to enhance workforce development and skills alignment in the Australian TCF industry. The map will serve as a reference to identify occupational structures, skill needs, career pathways, and vocational education and training pathways across the seven key TCF sub-sectors. These are:

- textiles manufacturing
- fashion and apparel manufacturing
- footwear manufacturing
- leather production
- dry cleaning and laundry services
- alteration and repair services
- textile recycling and remanufacturing.

The proposed map will comprise five key components:

- TCF industry overview
- occupational structure of the TCF industry sub-sectors
- skills profile of occupations
- career pathways
- vocational education and training pathways.

1. Purpose

The TCF Occupation and Skills Map aims to:

- map occupational structures across production and processing-focused roles¹ in key Australian TCF sub-sectors.
- identify current and emerging skills required by industry, including technical, generic, and future-focused skills.
- enhance alignment between occupations and nationally recognised qualifications by identifying emerging skill needs to be addressed in the MST Training Package skill sets and qualifications.
- chart career progression pathways that assist new and existing workers to understand vertical advancement and lateral diversification opportunities.
- identify gaps in training provision by identifying misalignments between occupational needs and current nationally recognised qualifications and skill sets.
- support industry transformation by identifying new and emerging roles driven by automation, digitisation, globalisation, sustainability, and circular economy models.

Production refers to the assembly, construction, or fabrication of goods from components or materials into finished or semi-finished products. The focus is on making discrete items, often involving multiple stages of assembly, cutting, sewing, or joining. Processing refers to the transformation of raw materials through chemical, mechanical, or thermal methods to change their fundamental properties or form. The focus is on converting or treating materials, often in continuous or batch operations.

2. Scope and Boundaries

Included Sectors

The TCF Occupation and Skills Map will focus on production and processing-focused roles within the following seven sub-sectors:

- textiles manufacturing
- fashion and apparel manufacturing
- footwear manufacturing
- leather production
- dry cleaning and laundry services
- alteration and repair services
- textile recycling and remanufacturing.

Excluded Areas

The map will exclude:

- textile-related retailing and wholesale operations
- warehousing and logistics functions (supply chain physical operations)
- offshore manufacturing operations
- other industries that utilise textiles as inputs (furnishings, furniture, vehicle production, etc).

3. Proposed Structure: Five-Component Framework

The TCF Occupation and Skills Map comprises five integrated components, each serving distinct but complementary functions.

Component 1: TCF Industry Overview

Purpose: Provide foundational context and situational analysis of the Australian TCF industry.

This component will offer an industry-wide overview of the following:

1.1. Structure and size of TCF industry

- Major TCF sub-sectors identified and defined
- Industry size, structure, and geographic distribution of businesses and employment
- Principal occupational groupings and workforce profiles

1.2. Workforce trends and drivers

The industry overview will address transformational factors affecting skill needs.

Figure 1: Key workforce trends informing skills mapping

Trend	Key Issues
Global competition	Skills shortages, upskilling needs, impact of offshoring on domestic employment
Digital transformation	Automation, robotics, digital design tools, e-commerce, Industry 4.0 capabilities
Sustainability and circular economy	Green skills, waste reduction, end-of-life product design, recycling, remanufacturing and compliance requirements
Workforce participation and diversity	Workforce demographics - gender diversity, age profile, entry pathways, progression barriers

1.3. Industry challenges and opportunities impacting on skill needs:

This component will provide an overview of:

- Challenges: Global competition and cost pressures, supply chain transformation, technology-driven production disruption.
- Opportunities: High-value manufacturing and design, circular economy transition, rapid design-to-market capability, Made in Australia market positioning, smart and tech-enabled products, sustainable production practices.

1.4. Skill needs:

This component will provide an overview of:

- Generic skills transferable, cross-cutting skills applicable across multiple roles and sectors such as communication, teamwork and problem solving.
- Technical skills industry or role-specific capabilities essential for job performance.
- Emerging skills skills critical to digital transformation and changing business models (design, innovation, digital literacy, sustainability, compliance).

Component 2: Occupational structure of TCF sub-sectors

Purpose: Map occupational roles within each of the seven TCF sub-sectors.

This component will describe the occupational structure of each sub-sector in the TCF industry. It will include:

2.1 Subsector overview:

For each sub-sector, the component will provide:

- workforce profile and key statistics (employment numbers, demographics, participation rates)
- subsector trends and outlook (growth projections, consolidation patterns, market positioning)
- current and anticipated innovations (automation adoption, digitalisation initiatives, sustainability transitions, circular economy developments)
- identification of new and emerging occupations and associated skill requirements.

2.2 Occupational structure:

Occupations in each sub-sector will be categorised into the following key functional areas:

Categories	Functional Areas	Examples
Production and processing roles	Occupations involved in the manufacture, assembly, and treatment of textile, clothing, footwear, and leather products. Production roles focus on the fabrication and assembly of finished goods such as garments, footwear, and accessories. Processing roles focus on transforming and treating raw materials and textiles using chemical, mechanical, or thermal methods. Workers in this functional area operate machinery, perform manual assembly tasks, monitor production processes, and ensure goods meet quality and safety standards.	 Production: sewing machinists garment cutters footwear assemblers sample machinists leather goods makers upholsterers, canvas goods makers clothing trimmers Processing: textile dyeing and finishing operators, yarn spinners fibre extrusion technicians tannery operators textile bleaching and mercerising workers, laundry and dry-cleaning operators fabric coating technicians

Technical and engineering roles

Occupations focused on the application of technical and engineering expertise to develop, maintain, and optimise TCF manufacturing systems, equipment, and processes. These roles involve machinery installation, maintenance, and repair; process engineering; and the implementation of new technologies such as automation and digital manufacturing. Workers in this area ensure production efficiency, equipment reliability, and continuous improvement in manufacturing operations. Note: quality assurance and compliance are addressed in a distinct functional area.

- textile technologists
- mechanical and manufacturing engineers,
- maintenance fitters
- knitting and weaving technicians
- automation and robotics technicians, cad/cam technicians

Design roles

Occupations centred on the creative and technical development of textile, clothing, footwear, and leather products. These roles involve conceptualising, designing, and specifying the appearance, function, and construction of products. Design professionals interpret market trends, customer requirements, and technical constraints to create original designs, patterns, and prototypes ready for production.

- fashion designers
- textile designers
- footwear designers
- leather goods designers
- pattern makers
- graders
- cad pattern technicians
- sample machinists
- print and surface designers
- colour technologists
- product developers

Supply chain and logistics roles

Occupations responsible for the sourcing, procurement, storage, and distribution of raw materials, components, and finished TCF products. These roles manage supplier relationships, inventory control, warehousing, import/export compliance, and transportation to ensure the timely and cost-effective flow of goods. Workers in this area coordinate activities across the supply chain, from fibre and fabric sourcing through to delivery to retailers or end customers.

- procurement and sourcing officers
- supply chain coordinators
- warehouse supervisors
- inventory controllers
- import/export clerks
- freight and logistics coordinators
- raw materials buyers
- distribution managers

Business, marketing, and sales roles

Occupations involved in the commercial, strategic, and promotional activities that support TCF enterprises. These roles encompass business management, financial planning, market research, branding, advertising, wholesale and retail sales, and customer relationship management. Workers in this functional area drive revenue, develop market opportunities, build brand presence,

- sales representatives
- merchandisers
- retail managers
- marketing coordinators
- brand managers
- export sales managers
- fashion buyers
- e-commerce managers
- business development officers

	and ensure the commercial viability of TCF businesses.	account managers
Quality assurance and compliance roles	Occupations responsible for ensuring products meet quality standards, regulatory requirements, and industry certifications. These roles involve inspection, testing, auditing, documentation, and compliance with safety, environmental, and ethical standards throughout the supply chain.	 quality controllers compliance officers product safety specialists Auditors (social and environmental) Certification coordinators Laboratory testing officers.
Sustainability and circular economy roles	Occupations focused on environmental stewardship, waste reduction, recycling, and the implementation of circular economy principles within TCF operations. These roles involve lifecycle assessment, sustainable sourcing, textile recovery and recycling, remanufacturing, and corporate sustainability strategy.	 Sustainability managers Circular economy specialists Textile recycling coordinators Environmental officers Waste management coordinators Sustainable sourcing officers
Digital and technology roles	Occupations focused on the application of digital technologies, data analytics, and information systems to support TCF operations. These roles involve ecommerce platforms, enterprise software, data management, digital marketing, and the integration of Industry 4.0 technologies.	 E-commerce specialists IT support officers Data analysts Digital marketing coordinators ERP system administrators Automation programmers

For each occupation, the map will include a title and a concise description of the role's scope and primary responsibilities. As noted previously, the mapping exercise will not cover retail, wholesale, warehousing, or logistics functions. However, for completeness, key occupations in these functional areas will be identified in this component of the mapping task.

2.3 New and emerging roles:

The component will identify:

- Occupations emerging from digitalisation and automation
- Niche and hybrid roles reflecting new work practices, blended job roles or technology-enabled roles

Component 3: Skills profile of occupations

Purpose: This component will provide a detailed skills profile for each occupation identified in a subsector.

3.1 Skills profile:

For each occupation identified in a sub-sector, the skill profile will specify:

- job role title and functional classification
- key tasks and critical work functions
- technical skills industry or role-specific capabilities essential for job performance
- generic skills transferable, cross-cutting skills applicable across multiple roles and sectors such as communication, teamwork, problem solving, workplace health and safety
- essential versus optional skills (differentiation of always-required versus context-dependent skills)
- emerging skills (new competencies critical to digital transformation, automation, sustainable production, and circular economy practices).

3.2 Qualification and classification alignment:

Each skill profile will reference:

- relevant Training Package skill sets and qualifications
- alignment with the Australian Qualifications Framework (AQF) levels
- alignment with Australian Bureau of Statistics (ABS) Skill Levels
- alignment with the Open Source Classification of Occupations for Australia (OSCA)

This multi-layered alignment ensures integration with national standards and frameworks governing vocational education and occupational classification.

A sample occupational skill profile is provided as $\underline{\mathsf{Appendix}}\,\mathsf{A}$.

Component 4: Career Pathways

Purpose: Map progression opportunities enabling workforce development and retention.

Vertical Progression:

Vertical career pathways involve advancement through occupational hierarchy, representing increasing skill complexity, responsibility, and remuneration.

For example:

 $Trainee\ Machinist
ightarrow Machine\ Operator
ightarrow Senior\ Operator
ightarrow Production\ Manager$

Lateral Progression:

Lateral pathways enable workers to move across different job functions, departments, or specialisations at similar skill levels. These pathways facilitate:

- skills diversification and cross-functional knowledge development
- workforce flexibility and adaptability
- positioning for future vertical advancement or hybrid role creation.

For example:

 $Garment\ Technician o Quality\ Assurance\ Specialist\ o\ Sample\ Development\ Specialist\ o\ Technical\ Manager$

Career pathways mapping addresses industry challenges in recruitment, workforce retention, skills development, and adaptability, particularly given:

- high labour turnover in TCF sectors
- need for upskilling and reskilling in response to technological change
- growing demand for multi-skilled workers capable of functioning across multiple operational contexts
- ageing of the TCF workforce and difficulties in attracting new entrants to the industry.

Component 5: Education and Training Pathways

Purpose: Align occupational requirements with nationally recognised qualifications and skill sets.

Content and Scope:

This component will:

- map occupations in each sub-sector to relevant Training Package qualifications and skill sets
- identify misalignments, gaps, and deficiencies in current qualifications and skill sets
- highlight opportunities for upskilling and reskilling through existing training frameworks
- identify gaps where current Training Package offerings do not adequately address emerging occupational skill requirements.

The education and training pathways component directly supports:

- workforce development planning by RTOs
- skill set and qualification development within the MST Training Package
- identification of priorities for vocational education qualification and skill set development
- reskilling and upskilling during industry transformation.

This component of the mapping exercise will be restricted to nationally recognised skill sets and qualifications primarily drawn from the MST Training Package.

Appendix A - Sample Skill Profile - Industrial sewing machine operator

1. Job role

TCF sub-sector	Fashion and Apparel
Functional area	Production
Job role	Industrial Sewing Machine Operator
Job role description	Operates industrial sewing and related machines to assemble, sew and finish textile products according to specified quality, productivity and safety standards, following work orders and standard operating procedures.
Performance expectations	Achieve daily output and quality targets for assigned operations.
	Report machine, material or quality issues promptly to supervisors.
	Adhere to workplace safety and housekeeping requirements.
Specialisation	Embroider
Application in other TCF sectors	Textile manufacturing e.g. cut-and-sewn textile products, industrial textiles, upholstery, canvas goods.
	Leather manufacturing and leather goods e.g. bags, belts, saddlery, protective gear, accessories
	Dry cleaning and laundry services that provide repairs, alterations or sewing related finishing.
	Textile recycling and remanufacturing e.g. re-sew recovered panels into new products such as tote bags, cushions, kids' wear, workwear, accessories using existing patterns or simple templates for remanufactured lines.
	Repairs and alteration e.g. shorten or lengthen hems on pants, skirts and dresses, take in or let out side seams, waistbands, darts and seams on jackets, shirts and dresses, adjust sleeve length, armhole, shoulder and neckline for better fit.

2. Key tasks and critical work functions

Key tasks	Set up, operate and shut down industrial sewing machines for allocated styles and operations.
	Inspect workpieces, correct minor defects and segregate non-conforming items.

	Sew components and complete products to required measurements, seam types and finishing standards.
	Maintain a clean, safe and organised workstation and support basic machine care.
Critical work functions	Machine preparation and setup
	Sewing operations and workflow execution
	In-process quality inspection and rectification
	Workplace safety, housekeeping and basic maintenance
	Participation in team communication and continuous improvement activities

3. Technical Skills

Technical skill	Brief description for this skill
Industrial machine sewing operations	Set up and operate industrial sewing machines to produce required seams safely.
Garment/product construction and assembly	Interpret simple patterns or work tickets and assemble components in sequence.
Fabric handling and material characteristics	Handle common fabrics correctly to avoid damage, distortion or defects.
Production workflow and line operations	Follow line layout, work allocation and pass work correctly between stations.
Workplace health and safety health	Apply basic WHS procedures, use guards/PPE and maintain safe working conditions.
Basic equipment care and housekeeping	Perform routine cleaning and simple preventive care on machines and area.
Digital machine interface and work orders*	Use simple digital displays/terminals to read work orders and select programs.

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4. Generic Skills

Generic Skill	Brief description
Teamwork	Cooperates with colleagues and supervisors to meet production targets.
Communication	Interprets instructions and reports issues with quality, materials or equipment.
Problem solving	Identifies routine sewing or machine faults and seeks appropriate remedies.
Learning	Adapts to new styles, machines and methods with guidance and training.
Initiative	Raises suggestions on improving methods or recurring quality issues.
Service / customer orientation	Plans own workflow to complete orders within required timeframes, balancing speed and quality so that customer delivery dates are met

5. Emerging skills

- Sustainable production practices (TS / GS): Apply methods that minimise fabric waste and support segregation of off-cuts and rejects for recycling or reuse.
- Digital production data capture (TS / GS): Record basic production and defect data using handheld devices or terminals to support analytics and line improvement.
- Participation in continuous improvement (GS): Contribute ideas in small-group problem-solving or lean activities to enhance safety, quality or throughput.

6. VET Qualifications and Skill Sets

Entry-level preparation

- MSTSS00015 Industrial Sewing Skill Set to build fundamental industrial sewing capability.
- MST20722 Certificate II in Apparel, Fashion and Textiles as a broad entry qualification for basic apparel and textile production roles.

Intermediate / trade-level development

• MST31022 Certificate III in Apparel, Fashion and Textiles for multi-operation production roles across clothing and textiles.

 Relevant units such as MSTTX3014 Set up, adjust and maintain industrial sewing machines, where the role includes higher-level setup and troubleshooting responsibilities.

7. Job progression

Possible job progression: Sample Machinist \rightarrow Garment Machinist \rightarrow Team Leader \rightarrow Quality Control Technician

8. Classification

Australian Qualifications Framework	2
Australian Bureau of Statistics (ABS) Skill Levels	4
Open-Source Classification of Occupations for Australia (OSCA)	71413 Sewing Machinist