



REPORT: FORESTRY TRAINING AND EDUCATION FUTURE SKILLS ASSESSMENT



March 2023

Skills & Training

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Regional Forestry Hub with funding from the Australian Government,
Department of Agriculture, Fisheries and Forestry

Current and Future Skills and Training Needs of the Forest and Timber Industry in South and Central Queensland

This report was commissioned by the South & Central Queensland Regional Forestry Hub with funding from the Australian Government, Department of Agriculture, Fisheries and Forestry.



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INTRODUCTION

The forest and timber industry makes a significant contribution to the rural and regional economies of Queensland, both economically and socially. The industry contributes around \$4 billion to Queensland's economy each year¹ and directly employs more than 7,800 people in its forest growing, timber processing, and pulp and paper sectors².

Global changes in technology, sustainable development, and the growth of the bioeconomy are reshaping the market for manufactured wood and wood waste products and giving rise to new business models and employment opportunities in the industry.

As a result of these changes, new areas of work and jobs will emerge to complement the more traditional roles that will continue to underpin a viable industry; yet businesses struggle to identify and access suitable training programs and to attract and recruit workers with the required skills.

To overcome these challenges, government, industry, and educational institutions will need to identify the future skills and qualifications that will provide graduates and workers with the skills and knowledge they need to succeed in the industry in the future and work together to realise this industry's full potential.

PROJECT AIM

The South and Central Queensland Regional Forestry Hub engaged ForestWorks to conduct a regional study to assess the current and future skills and training requirements of the forestry and wood products industry.

Specifically, this study identifies workforce gaps, skill needs and training opportunities for future success in the industry, as well as challenges in attracting and recruiting workers. This information is intended to assist in critically considering the industry's skills and training needs in light of its current and future goals and support the growth of a trained and safe workforce through the implementation of appropriate strategies and partnerships with educational and training organisations and governments.

METHODOLOGY

The data analysed for this report is drawn from a) interviews and surveys with industry businesses and training organisations and b) desktop research involving sources such as the Australian Bureau of Statistics (ABS) and other recent industry reports on industry workforce, skills and training.

- a) **Interviews and surveys with industry and training organisations** were conducted during November and December 2022 to identify the current and future workforce and skill demand, training requirements and challenges, difficulties in attracting and recruiting employees, and any assistance required to implement workforce development practices.

¹ <https://www.business.qld.gov.au/industries/farms-fishing-forestry/forests-wood/industry-queensland/profile#:~:text=Queensland's%20forest%20and%20timber%20industry,than%208%2C800%20people%20in%202017>

² 2021 Census of Population and Housing from the Australian Bureau of Statistics

An invitation to participate in this study was extended to all forestry and wood products businesses from the South and Central Queensland Regional Forestry Hub through Timber Talk, a publication of Timber Queensland, and Daily Timber News. In addition, twenty-five businesses representing each industry sector were contacted directly and invited to participate.

As a result, 13 industry businesses employing more than 1,500 people in the region participated and contributed to the study with information about their current and future workforce and skills needs.

Seven training organisations registered to provide training in Queensland (with or without forest and wood products qualifications on their scope) were also contacted. Of these, 4 provided comments on training delivery challenges and opportunities for improving training capability in the region.

- b) **Desktop research** was conducted to provide an overview of the forest and wood products in the South and Central Queensland industry and its workforce profile. The primary source of data used for compiling this information were ABS datasets, including 2021 Census. Other additional data or information sources that were used are referenced throughout the report.

The study and workforce data presented in this report covers the forest and timber product industry in the following Local Government Areas within the South and Central Queensland Regional Forestry South and Central Queensland Regional Forestry Hub:

- Banana Shire Council
- Bundaberg Regional Council
- Central Highlands Regional Council
- Cherbourg Aboriginal Shire Council
- Fraser Coast Regional Council
- Gladstone Regional Council
- Goondiwindi Regional Council
- Gympie Regional Council
- Livingstone Shire Council
- Lockyer Valley Regional Council
- Maranoa Regional Council
- Moreton Bay Regional Council
- Noosa Shire Council
- North Burnett Regional Council
- Rockhampton Regional Council
- Scenic Rim Regional Council
- Somerset Regional Council
- South Burnett Regional Council
- Southern Downs Regional Council
- Sunshine Coast Regional Council
- Toowoomba Regional Council
- Western Downs Regional Council
- Woorabinda Aboriginal Shire Council

PROJECT LIMITATIONS

To effectively address the workforce and skills gap in the forest and wood products industry through strategies and programs, it is essential to understand both the scope and size of the gap. This study aimed to assess the scope and provide an indication of the scale of regional workforce and training needs for the diverse array of occupations. However, due to its limited timeframe, participant businesses were unable to accurately estimate the number of employees that need to be recruited and/or trained for each type of job and skill. Therefore, it is recommended that businesses in the industry be supported to more thoroughly identify the magnitude of their skill needs and training priorities. This could be done through engagements in further activities and the implementation of strategies and programs that encourage skill development.

1 EXECUTIVE SUMMARY

OVERVIEW OF THE INDUSTRY

Queensland’s Forest and Wood Products Industry

The forest and timber industry contributes around \$4 billion annually to the Queensland economy and directly employs over 7,800 people³. Comprising more than 2,000 businesses across three industry sectors, this industry plays a critical role in rural and regional economic and social development. It provides jobs that bring together a diverse workforce and highly specialised skills to grow sustainable forests and convert logs into a range of timber products. In addition, downstream timber processing activities generate a range of engineered wood products and structural components, which are used to construct the majority of state and Australian homes and many other buildings, thus making the industry an integral part to the Queensland economy and its people.

Forestry and support services	Forestry and forestry support sectors grow and manage native forests and plantations for commercial timber production. There are around 390 forest growers and 166 forestry support service businesses in Queensland. The majority of these are small, non-employing businesses. Important forest growers and/or management organisations in the state include HQPlantations and Forest Products. Farm forest growers and other private growers are also active in the state.
Harvesting and haulage	The forest harvesting sector consists of businesses that fell, process, and transport logs for products like timber, plywood, and pulpwood. These businesses also conduct thinning and collecting of forest biomass. There are 330 forest harvesting contractors in Queensland, 90% of which are non-employing businesses or have no more than 4 employees.
Wood products manufacturing	<p>Businesses in the wood products manufacturing sector process logs and timber into products for the building and construction industry as well as other markets. Sawmills convert logs into rough-sawn timber, dressed and re-sawn timber products. Processors converting logs into utility poles are operational in the region as well. Queensland has around 170 timber sawmills, including large and small softwood and hardwood processors, and portable mills. These businesses are mostly based in regional communities.</p> <p>There are around 10 small and medium wood chipping mills in Queensland, which convert logs or sawmill residues into wood chips for use in paper and wood panel production.</p> <p>Timber re-sawing and dressing mills use sawn timber from other mills to produce finished products such as floorboards, weatherboards, and moldings. These products may require seasoning, chemical preservation, or both. Queensland has about 40 of these mills, including a few large and many small processors.</p>

³ It also includes employment in the pulp and paper manufacturing sector.

There are few Queensland businesses that manufacture plywood, panel boards, laminated timber products, and many that produce structural timber frames, roof trusses, wooden containers, pallets, packing cases and other wooden products. The two main panel boards manufacturing sites are based in Gympie and one plywood manufacturer is based in Brisbane. There are also over 700 businesses that manufacture structural timber frames, roof trusses and other wooden structural fittings, and some others that produces wooden containers, pallets, packing cases and other wooden products.

Source: ABS, 2021, Counts of Australian Businesses June 2018 to June 2022, Cat. No. 8165.0

South and Central Queensland's Forest and Wood Products Industry

Employment

At the regional level, the forest and wood products industry employs 3,600 people in South and Central Queensland, which accounts for nearly half of the entire state's workforce in this industry. The largest employing region is Moreton Bay with 692 (19%) employees, followed by Gympie with 634 (18%), Fraser Coast with 608 (17%) and Sunshine Coast with 561 (16%).

Around 2,461 (68%) of the estimated workforce is employed in forestry and primary processing, while 1,115 (12%) are engaged in manufacturing of wooden structural fittings and components and other wood products.

Workforce diversity

Age distribution About 43% of workers in the forest and wood products sectors in South and Central Queensland are under the age of 40, 46% are between the ages of 40 and 60, and 11% are over the age of 60. The forestry, logging, and reconstituted wood product industries employ more people in the older age groups.

Women participation Women make up 15% of the forest and wood products industry workforce in South and Central Queensland, with higher proportions in the forestry and forestry support services sectors (19% and 28%, respectively). However, only 6% of the workforce in the manufacturing of reconstituted wood product is female, which is significantly lower than the national average (18%).

Aboriginal participation Aboriginal people make up 3% of the workforce in the forest and wood products sectors in South and Central Queensland, with the largest number of workers in timber processing (51 people) and the largest proportion in forestry support services (8%).

Job roles

Workers in the forest and wood products industry in the South and Central Queensland are primarily employed as labourers, machinery operators and drivers (25%), technicians and trade workers (24%), and managers (11%).

Forestry and support services Professional foresters, forestry workers and mobile plant operators make up roughly half of the forestry and support services workforce

Harvesting and haulage	Truck drivers, log plant operators and tree fellers are the main source of employment (50%) in the harvesting sector
Wood products manufacturing	The primary occupations in wood products manufacturing are machinery operators and forklift and loader drivers (30%), as well as sawmill and timber yard workers (25%). Cabinetmakers and carpenters are key roles in the production of wood joinery and timber structural components.

Source: ABS Census of Population and Housing, 2021, TableBuilder

IDENTIFIED CURRENT AND FUTURE LABOUR DEMANDS AND SKILLS AND TRAINING NEEDS IN THE FOREST AND WOOD PRODUCTS INDUSTRY IN SOUTH AND CENTRAL QUEENSLAND

Labour shortage and future labour demand

There is an alarming labour shortage, particularly for critical jobs such as foresters, harvester operators, saw technicians, wood machinists, mechanical fitters, truck drivers and estimators and detailers (frame and truss). With market and legislative forces, competition for skilled workforce, individual businesses expanding or aiming for improvement, and retirements estimated to account for a 5% gap in the workforce, the situation is only predicted to worsen over the next five years.

As the industry continues to grow, businesses are faced with the challenge of hiring and training new employees to meet the demands of the market. Analysis reveals that businesses anticipate needing to hire more people in a variety of job categories over the next five years.

Forestry and support services	New plantations are being planned, which will require more nursery workers, tree planters, silviculture employees and foresters. However, it is believed that with process improvements and the application of technology, these roles could be filled with fewer people, allowing for the reallocation of current workers to other roles.
Harvesting and haulage	Harvesting and haulage businesses will need to hire additional harvesting operators and truck drivers (one large business reported 10 harvesting operators and 20-30 truck drivers) in the next 3-5 years, as well as heavy machine operators for site preparation. There is also a growing demand for heavy machine operators and harvesting equipment operators, like harvesters, skidders, loaders, excavators and woodchippers, due to increased interest in biomass for energy from harvesting and vegetation regrowth management.
Wood products manufacturing	Sawn timber manufacturing - Sawmills may require more process operators if future log contracts and production targets increase, but this will depend on streamlining processes and using technology to lower labour costs. New job roles involving manufacturing and lean-driven processes are expected to be created, while existing manual timber graders are likely to be transferred to other positions/work functions. A new glulam facility is expected to become operational in the region by the end of 2023, requiring around 25 technical staff members once construction is complete. Frame and truss manufacturing – A key manufacturer and provider of metal connectors, software, machinery and engineering services to timber fabricators is

planning to expand their capacity by 50%. This will require the hiring of additional staff, including three estimators and detailers and additional machinery production workers, in the coming years.

Pellet manufacturing - A new pellet mill will be built in the region, requiring 4 operators with two specialised positions - quality control technicians and hybrid technical-mechanical specialists - to fill the roles. The required skills can be taught both on- and off-site in conjunction with an existing pellet manufacturing plant.

Skills and training needs

Businesses are also recognising the importance of employee development and are investing in in-house resources and also engaging with external training providers to help their employees gain the necessary skills for trade occupations, mobile plant operations, and other areas requiring a work permit. To further develop their workforce, some businesses are exploring the possibility of apprenticeships and mentorships. Additionally, businesses are taking steps to recognise and reward existing employees by providing them with formal training and qualifications.

As businesses look to the future, they are focusing their efforts on a variety of skill areas that are essential for businesses to remain competitive and to meet the demands of the ever-changing business environment. These skills include, but are not limited to business management, leadership, digital technology and data analysis, basic knowledge of trees, forest management and wood as well as equipment and process operation skills.

Sector	Skills / training needed	Targeted job roles
Forestry and support services	Business management	Management positions
	Forester degree	Entry-level foresters
	GIS	
	Skill sets in technology use and digital data management and application	Forestry technicians
	Skill sets in using aerial spraying and drones	Forestry technicians
	Chainsaw operations*	
	Chemical handling*	Forest workers
	Production burning (as part of vegetation regrowth management)*	
Report writing (using digital technology)		
Basic knowledge of trees and forest management	Harvesting operators	
Report writing (using digital technology)		
Harvesting and haulage	Business management (with a focus on communication, critical thinking and problem solving)	Managers / Senior operators
	Operate harvesting machine with winch-assist system	
	Operate harvesting machines (including mechanical felling, log extraction and loading)*	Harvesting operators
	Transport logs using trucks*	Truck drivers
Wood products manufacturing (processing)	Leadership	Site manager
	Operational risk	Operational risk manager
	Lean manufacturing	

Sector	Skills / training needed	Targeted job roles
	Leadership and people skills	Front-line managers; Team leaders
	Programming and electronics	Technicians
	Data analysis	Quality control technicians
	Wood science	
	Quality control	
	Drying techniques (operations)	
	Digital technology use	
	Visual grading - hardwood	Process operators
	Timber treatment techniques (operations)	
	Bench Operation/Sawyer/Line Bar & Sizing Carriage Operation	
	Finger jointing	
	Chainsaw	
	Certificate III in Timber processing*	
	Fire safety*	
	Mental health and wellbeing	
	Front-end loader*	Log yard operators
	Forklift*	Forklift drivers

Source: South and Central Queensland Regional Forestry Hub interviews, 2022

IDENTIFIED CHALLENGES IN WORKFORCE TRAINING AND RECRUITMENT IN THE FOREST AND WOOD PRODUCTS INDUSTRY IN SOUTH AND CENTRAL QUEENSLAND

Challenges in implementing formal workforce training:	There is a need to address the lack of training options available to the industry in the region and to develop training capacity and capabilities more broadly. While businesses are looking for industry-specific training that covers more than just trade-specific skills to increase the general knowledge of downstream and upstream processes in our industry, there is a lack of forest and timber industry trainers and training organisations in Queensland.
a) Lack of training options and support	Businesses will benefit from any support that enables them to access and choose training providers that best meet their needs and create partnerships with new training providers. Accessing support services, such as information about accessible training programs and government subsidies, as well as guidelines and assistance for executing workforce development plans, can also improve the industry's capacity to make workforce development decisions, according to businesses.
b) Lack of post-secondary programs	The main training issue in the forest sector is the lack of post-secondary programs and options for training new foresters. The forest sector needs support to access or import qualified foresters, and the government should create policies to make this easier to temporarily import qualified foresters until the local education system has the necessary resources to train domestic foresters. This shortage of foresters may also be a factor in the public's negative perception

	of forestry operations, as only forestry graduates can effectively communicate the sustainability of the sector.
c) Lack of RTOs	A lack of Registered Training Organisations (RTOs) that can provide and assess required skill sets for harvesting operators and truck drivers has been raised by businesses in harvesting and haulage. To overcome the challenge of the shortage of skilled workers, some businesses are offering training to operators of skidders, excavators, and loaders so they can become skilled in harvesting. Furthermore, businesses are enrolling their employees in Training and Assessment (TAE) courses. Sharing workplace trainers and using training providers for induction training such as contract obligations, fire awareness and industry safety is also seen as useful in getting new workers job ready.
Challenges in finding and recruiting suitable employees	<p>Finding workers with a good work ethic and willingness to work in the timber industry is a challenge. Wages are generally competitive in the industry but vulnerable to wage spikes in booming sectors, making it difficult to retain employees with transferable skills. There is a negative perception of the industry by the public. Competition for skilled workers from other manufacturing businesses and the mining industry is intense, and there is a lack of understanding of modern sawmilling and related fields.</p> <p>Businesses cite a variety of challenges when it comes to finding and hiring employees, including competition from other industries, public infrastructure in the regions, public awareness and perception of the industry and its jobs and wages, and the lack of school-based forestry traineeships or related topics in school curricula.</p>
Suggestions for attracting motivated individuals	Industry participants suggested that to attract motivated individuals to work in forest and wood products operations, we should focus on the fascinating aspects of our automation and equipment, communicate clearly about the industry and skills needed, and demonstrate our workplaces. We should also replicate successful models and determine the optimal learning approach for each employee.
Challenges in retaining skilled workers	Some businesses struggle to retain skilled workers due to the lack of succession and workforce development planning, a disconnect between expectations and reality, and pressure to increase wages.
Challenges faced by training providers	RTOs face a number of challenges in delivering nationally accredited training to our industry, such as learners dispersed over a large geographical area, a low student-to-trainer ratio, and a diverse range of jobs and skills that require expensive machinery and subject matter expert trainers. These challenges make it difficult for RTOs to travel long distances to train and assess small cohorts of learners on the job, and to fund the development that precedes their delivery.
Enhancing effectiveness	To ensure the effectiveness of the training, there needs to be greater interaction and coordination between industry and RTOs, with the RTOs providing knowledge-based training in a classroom or online environment and workplace

of training delivery	trainers and assessors or external trainers and assessors engaged by the RTO providing practical training and assessment on the job.
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The need for a new generation of trainers

Bridging the gap between industry and training providers	Businesses tend to be skeptical of a trainer's knowledge due to their lack of experience and disconnection from technological advancements and new work processes. As a result, training providers believe that a new generation of trainers - workplace trainers and assessors - is needed to capitalise on already skilled practitioners from the industry and assist vocational education and training in the industry.
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Working with training organisations to provide TAE Qualifications	Businesses and their workers can be supported to make the transition to teaching with the help of training organisations servicing forest and wood products industry. These training organisations can form partnerships with suitable RTOs to provide training and assessment (TAE) as a trade-based qualification (rather than corporate-based training) and assist new workplace teachers to take on training responsibilities and meet compliance requirements.
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Employer's role in supporting the transition to teaching	Employers must also be willing to release employees transitioning to teaching from their regular duties and change their job requirements so that they can participate in training activities.
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Source: South and Central Queensland Regional Forestry Hub interviews, 2022

2 INDUSTRY PROFILE

This section provides a brief overview of the forest and timber industry in Queensland, recognising that the vast majority of industry's activity is concentrated in the state's South and Central regions – the area covered by the Regional Forestry Hub.

Specifically, the section describes the industry's sectors, activities, and business counts to understand the industry's diversity, the range of jobs it offers, and its significance as a major source of employment at the state level.

The data used to inform this section, notably business counts, is sourced from the Australian Bureau of Statistics (ABS), which is publicly available at the national and state level. This made it impossible to limit the discussion to the South and Central Queensland Regional Forestry Hub.

It is also important to note that industry reports, including the Census of Population, that the Australian Bureau of Statistics (ABS) uses to compile national datasets are categorised using the Australian and New Zealand Industry Classification (ANZSIC). The ANZSIC divisions A – Agriculture, Forestry and Fishing and C – Manufacturing contains codes for the forest and wood products industry, which is represented by the 4-digit ANZSIC classes listed below.

0301 Forestry	1491 Prefabricated Wooden Building Manufacturing
0510 Forestry Support Services	1492 Wooden Structural Fitting and Component Manufacturing*
0302 Logging	1493 Veneer and Plywood Manufacturing
1411 Log Sawmilling	1494 Reconstituted Wood Product Manufacturing
1412 Wood Chipping	1499 Other Wood Product Manufacturing nfd**
1413 Timber Resawing and Dressing	

* Wooden Structural Fitting and Component Manufacturing encompass a large proportion of the cabinet makers and producers of shop fronts, doors, staircases and other joinery components in addition to manufacturers of structural components such as roof trusses and wall frames.

** Other Wood Product Manufacturing nfd (not further defined) encompasses businesses that manufacture wood products not elsewhere classified, including wooden containers, pallet, trellis and ornamental products.

2.1 FORESTRY AND SUPPORTS SERVICES

Queensland's forestry and forestry support sectors grow and manage native forests (state-owned and private) and plantation estates for the purpose of producing commercial timber. These sectors are comprised of forest growers and management organisations and companies that provide support services (such as silviculture operations, nursery operations, weed and pest control and tree planting operations) to forest growers on a fee or contract basis.

Roughly 82% of the domestic timber used in Queensland comes from local plantations, while the remaining 18% comes from native forests, with cypress pine accounting for about one-third and native hardwood for the other two-thirds.⁴

⁴ Department of Agriculture and Fisheries of the Queensland Government. 2016. Queensland Forest and Timber Industry. An overview. <https://www.publications.qld.gov.au/dataset/f49c9111-4490-4fcc-947b-a490f6389c6b/resource/f01947e3-50bc-44ac-996e-e747fa02b00a/download/5288qldforestandtimberindustryoverview.pdf>

There were around 390 forest growing businesses in Queensland in 2021, according to the Australian Bureau of Statistics (ABS) (Table 1). The vast majority of these were non-employing businesses, with only a few employing and paying a salary to a small number of people (between 1 and 19 people).

Significant forest growers and/or management organisations in the state include HQPlantations and Forest Products.

- HQPlantations is a private corporation. It owns and manages the majority of the Queensland plantation estate. The company employs approximately 150 people.
- Forest Products is a commercially focused unit of the Queensland Government's Department of Agriculture and Fisheries that manages the state-owned native forests. The unit employs around 100 staff located at more than 20 offices across Queensland.

Other forest growing businesses include:

- Farm forest growers who combine productive private native forests and cattle grazing in a mutually beneficial way. Many productive private native forests are located on large properties in southeast Queensland.
- Private forest growers who manage smaller, scattered plantation areas. Although in small numbers, the majority of these are located in southeast Queensland, along the coast.

In addition, 166 businesses provided forestry support services such as planting and pruning trees, forest restoration or maintenance (Table 1). These businesses typically specialise in a specific service area or operate in a particular geographic region. Only a small proportion of these businesses employed more than 20 people. The majority either did not employ anyone or employed far fewer individuals.

2.2 HARVESTING AND HAULAGE

The forest harvesting sector consists of businesses contracted to conduct mechanical felling and processing of trees according to a forest/plantation management plan and transport the logs to a loading site. From here, logs are loaded, transported, and unloaded at the mills by the same harvesting business or a business specialising in transport for processing into products such as timber, plywood, reconstituted wood panels, wood chips, and pulpwood.

Harvesting equipment is also used to cut vegetation (tree) regrowth, conduct thinning in plantations and private native forests managed for timber production and collect forest biomass.

Around 330 forest harvesting contractors operated in Queensland in 2021 (Table 1). While some of these businesses had over 5 or 20 employees, the vast majority (90%) were non-employing businesses or had no more than 4 employees.

2.3 WOOD PRODUCTS MANUFACTURING

Businesses in the manufacturing of wood products process logs and timber into products that are primarily used by the building and construction industry, as well as other markets.

These businesses engage in log sawmilling, timber resawing and dressing, wood chipping, engineered wood product manufacture, and other related activities.

Sawmills convert hardwood or softwood logs into rough-sawn timber, dressed and re-sawn timber in a wide variety of grades and sizes. Poles are also produced in Queensland. Timber drying and chemical preservation may be used in the production of poles or rough timber.

Queensland had approximately 170 timber sawmills in 2021 (Table 1). These include a few large, high-capacity softwood sawmills in southeast Queensland that produce mostly structural sawn timber and a number of smaller softwood processors that serve the fencing and treated timber markets. Additionally, there are several medium-sized and many small hardwood and cypress pine sawmills (including portable mills) that use logs sourced from native forests to produce a range of high-quality structural and appearance-grade products. Most of these businesses are based in regional communities.

The residues (such as wood chips, offcuts, sawdust and shavings) generated by large sawmills supply a range of additional wood product manufacturers or other applications such as wood pellets and landscaping products.

Wood chipping mills convert logs or sawmill residues into chips. The wood chips are used in downstream sectors for paper and paperboard manufacturing and wood panel production. About 10 small wood chipping mills operated in Queensland in 2021 (Table 1).

Timber re-sawing and dressing mills use timber that was first sawn, kiln dried and dressed at a sawmill to produce finished products such as floorboards, weatherboards, or mouldings. These products may require seasoning (kiln drying or air drying), chemical preservation, or both, depending on the end uses in the building construction industry. Queensland had approximately 40 mills for re-sawing and dressing timber in 2021, including a few large and many small processors (Table 1).

In addition, there were a few Queensland businesses that manufactured plywood, panel boards (medium density fibreboard and particleboard) and laminated timber products in 2021. The two main panel boards manufacturing sites are based in Gympie and the plywood manufacturer is based in Brisbane. There were also over 700 businesses that manufactured structural timber frames, roof trusses and other wooden structural fittings, and some others that produces wooden containers, pallets, packing cases and other wooden products (Table 1).

Table 1: Number of forest and wood products businesses in Queensland by industry sector and employment size ranges, July 2021

Industry Sector	ANZSIC 4-digit level Industry	Number of employees (ranges)					Total
		0	1-4	5-19	20-199	200+	
Forestry and support services	Forestry	346	30	10	3	0	389
	Forestry Support Services	103	37	19	7	0	166
	Proportion (%)	81%	12%	5%	2%	0%	100%
Harvesting	Logging	195	114	18	6	0	333
	Proportion (%)	59%	34%	5%	2%	0%	100%
Wood products manufacturing	Wood Chipping	8	0	3	0	0	11
	Log Sawmilling	83	43	28	20	0	174
	Timber Resawing and Dressing	20	8	9	4	3	43
	Reconstituted Wood Product Manufacturing	8	4	6	3	0	21
	Veneer and Plywood Manufacturing	3	3	0	3	0	6
	Proportion (%)	48%	23%	18%	12%	1%	100%
Other wood products manufacturing	Wooden Structural Fitting and Component Manufacturing	328	234	153	53	0	770
	Prefabricated Wooden Building Manufacturing	16	8	5	0	0	30
	Other Wood Product Manufacturing, nfd	67	44	19	12	0	142
	Proportion (%)	44%	30%	19%	7%	0%	100%
Total		1,177	525	270	111	3	2,085

Note: ABS's Counts of Australian Businesses dataset counts all actively trading businesses in the Australian market sector that remit GST through Business Activity Statements (BAS) lodged with the Australian Tax Office (ATO). Businesses are classified according to Australian and New Zealand Industry Classification (ANZSIC). ANZSIC's codes and definition of the forest industry sectors are provided in Attachment 1. Businesses with a Pay As You Go (PAYG) withholding role with the ATO are considered employing businesses. Employment excludes non-salaried directors, volunteers, persons paid by commission only, and self-employed persons such as consultants and contractors.

Source: ABS, 2021, Counts of Australian Businesses June 2018 to June 2022, Cat. No. 8165.0

3 WORKFORCE PROFILE

This section provides a profile of the forest industry workforce in the South and Central Queensland. It examines employment levels and workforce diversity, including gender, age, and Aboriginal and Torres Strait Islander participation. This information is sourced from the Employment Datasets of the ABS 2021 Census.

3.1 EMPLOYMENT

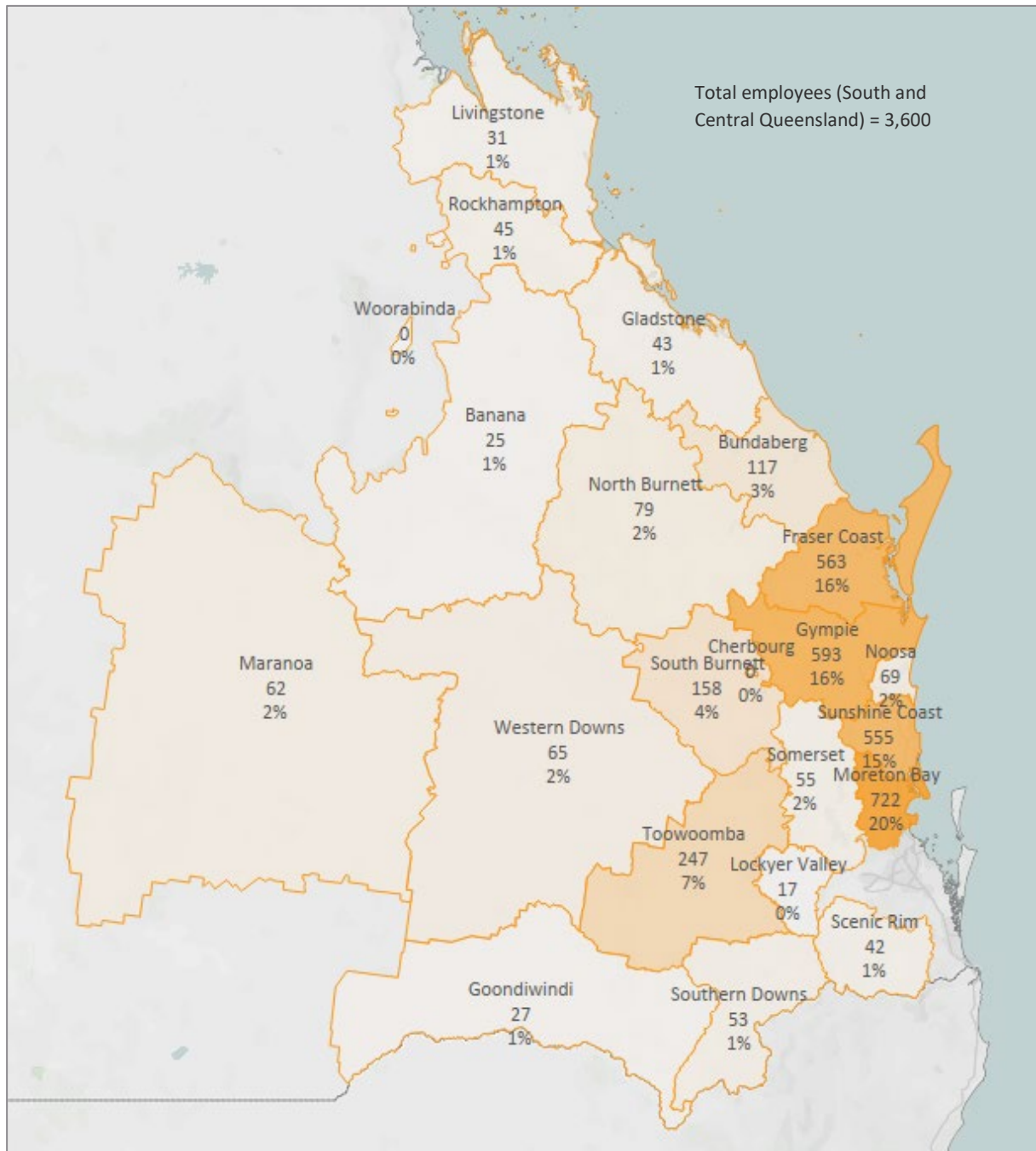
The forestry and wood products sectors employ about 3,600 people in South and Central, which represents roughly half of the total employment of this industry in Queensland (6,753). Figures 1, 2 and 3 illustrate the regional and sector distribution of this workforce.

The largest employing region is Moreton Bay with 722 (20%) followed by Gympie with 593 (16%), Fraser Coast with 563 (16%) and Sunshine Coast with 555 (15%) (Figure 1).

Close to 68% (2,461) of this workforce is employed by forestry and primary processing businesses, which are prevalent in Gympie, Fraser Coast and Moreton Bay (Figure 2). The remaining 12% (1,115) is engaged in the manufacturing of wooden structural fittings and components (such as roof trusses, doors, wood-framed doors, wall and window frames, shop fronts and joinery including kitchen fittings for buildings) and other wood products (such as wooden containers, pallet, trellis and ornamental products), primarily in Moreton Bay and Sunshine Coast (Figure 3).

Note: The 2021 ABS Census data classifies a person's industry of employment based on how they answer a number of questions, and this is coded according to the Australian and New Zealand Standards Industrial Classification (ANZSIC). Attachment 1 provides the ANZSIC codes and definition of the forest industry sectors.

Figure 1: Employment level and distribution by local government area (LGA) in the industry, 2021, South and Central Queensland (no, % of total in South and Central Queensland)



Source: ABS Census of Population and Housing, 2021, TableBuilder

Figure 2: Employment by local government area (LGA) in the forestry and primary wood product manufacturing sectors, 2021, South and Central Queensland

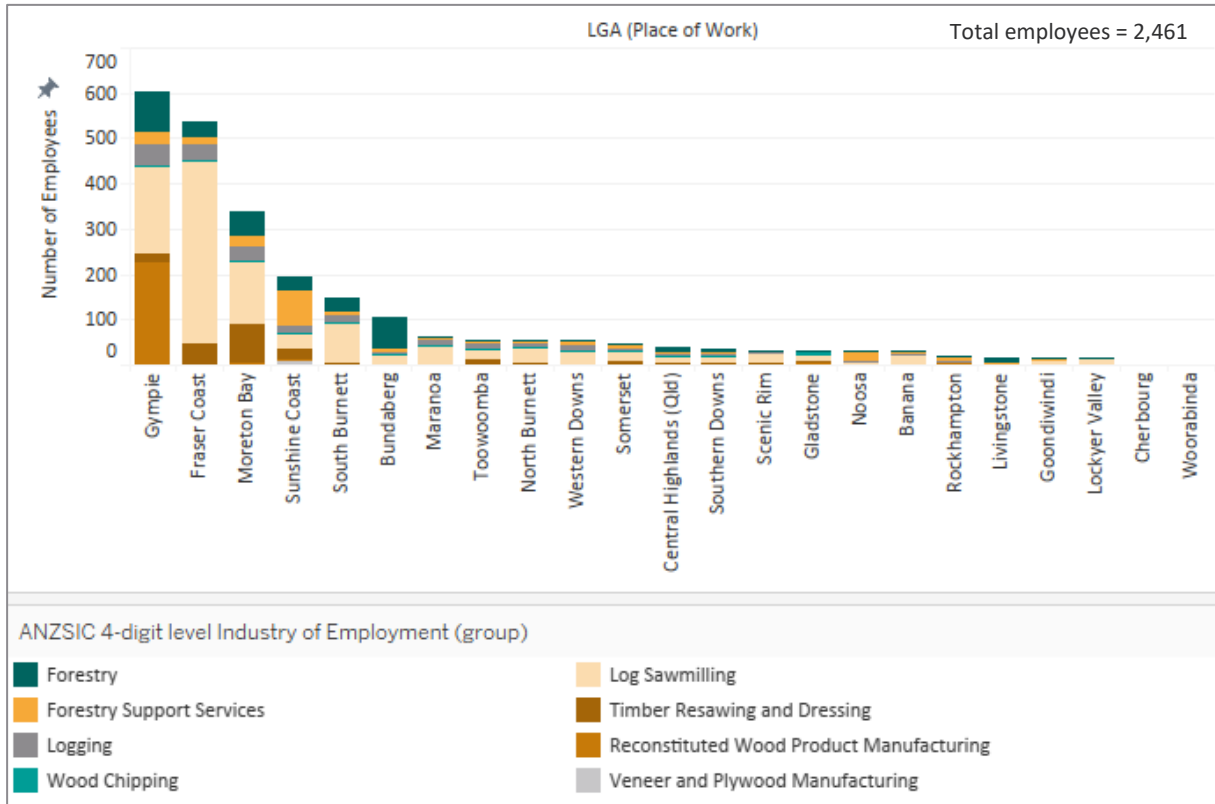
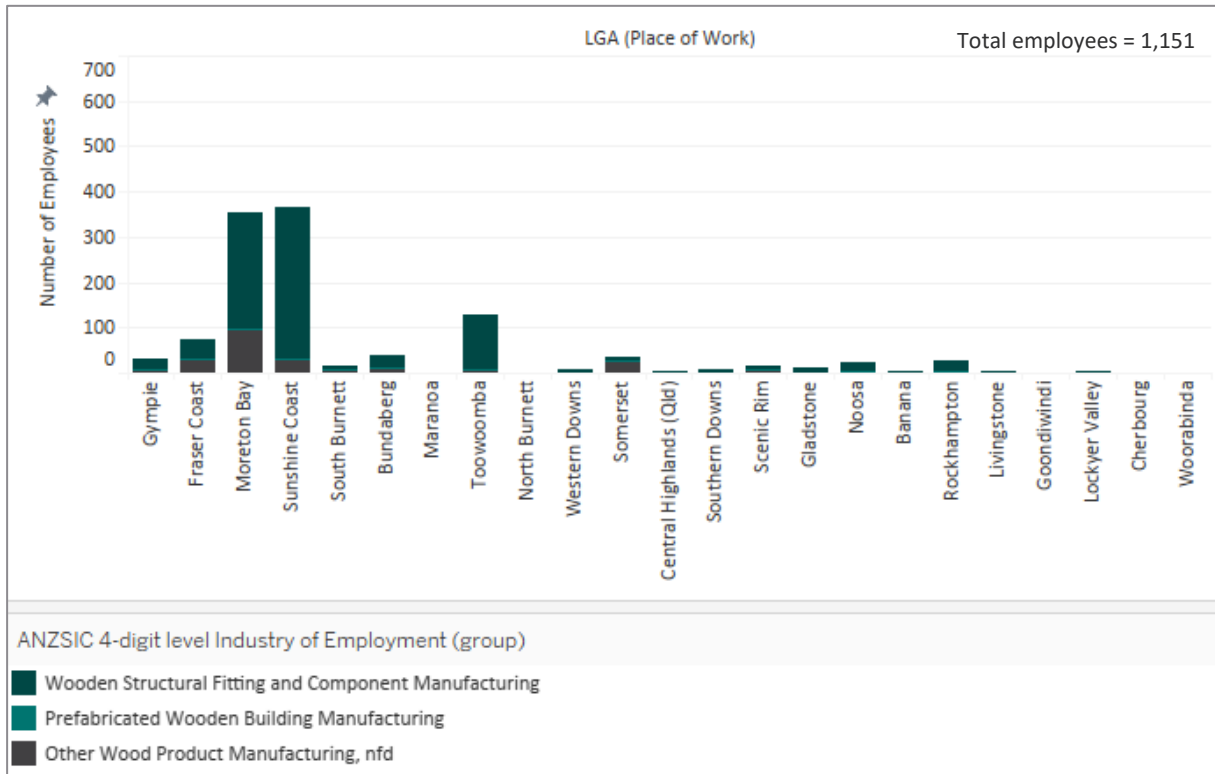


Figure 3: Employment by local government area (LGA) in other wood product manufacturing sectors, 2021, South and Central Queensland



Source: ABS Census of Population and Housing, 2021, TableBuilder

3.2 WORKFORCE DIVERSITY

3.2.1 Age distribution

The industry employs a significant proportion of young people in South and Central Queensland. Roughly 43% of its workers are under the age of 40 and 46% are between the ages of 40 and 60. The remaining 11% are over the age of 60 and close to retirement.

Table 2 shows the age distribution of the workforce by industry sector. In forestry, logging and the production of reconstituted wood product, the workforce is more heavily concentrated in the elder age groups.

Table 2: Workforce age distribution by industry sector, 2021, South and Central Queensland

Industry Sector	ANZSIC 4-digit level Industry of Employment	Age in Ten Year Groups					
		10-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-69 years
Forestry and support services	Forestry	8 2%	58 16%	57 16%	78 22%	107 30%	47 13%
	Forestry Support Services	0 0%	48 24%	51 25%	51 25%	33 16%	20 10%
Harvesting	Logging	11 5%	34 17%	30 15%	32 16%	63 31%	32 16%
Wood product manufacturing	Log Sawmilling	42 4%	267 24%	173 16%	255 23%	257 23%	117 11%
	Timber Resawing and Dressing	11 6%	42 22%	41 21%	39 20%	46 24%	13 7%
	Reconstituted Wood Product Manufacturing	4 2%	20 9%	41 18%	59 26%	76 34%	24 11%
	Other Wood Product Manufacturing	51 6%	198 22%	186 21%	189 21%	165 18%	103 12%
	Other Wood Product Manufacturing, nfd	0 0%	35 20%	28 16%	40 22%	52 29%	24 13%
		10-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-69 years

Note: The wood chipping, veneer and plywood manufacturing and prefabricated wooden building manufacturing sectors are not included in this figure since they have no or few employees (less than 10) according to the 2021 ABS Census.

Source: ABS Census of Population and Housing, 2021, TableBuilder

3.2.2 Gender

Women have been considerably underrepresented in the Australian forest and wood products industry, with their participation increasing slightly from 11% in 2016 to 18% in 2021⁵.

Women make up 15% of the industry's workforce in South and Central Queensland. A higher proportion of women are employed in the forestry and forestry support services sectors (19% and 28%, respectively). Women make up only 6% of the workforce in the manufacturing of reconstituted wood product, which is significantly less than the national average for the forest and wood products industry (Table 3).

Table 3: Women workforce participation by industry sector, 2021, South and Central Queensland

Industry Sector	ANZSIC 4-digit level Industry of Employment	Gender			
		Female		Male	
		Employees (No)	Proportion (%)	Employees (No)	Proportion (%)
Forestry and support services	Forestry	69	19%	301	81%
	Forestry Support Services	61	28%	155	72%
	Total	130	22%	456	78%
Harvesting	Logging	42	18%	196	82%
	Total	42	18%	196	82%
Wood product manufacturing	Log Sawmilling	163	14%	998	86%
	Timber Resawing and Dressing	40	19%	176	81%
	Reconstituted Wood Product Manufacturing	15	6%	219	94%
	Total	218	14%	1,393	86%
Other wood product manufacturing	Wooden Structural Fitting and Component Manufacturing	115	13%	783	87%
	Other Wood Product Manufacturing, nfd	33	16%	179	84%
	Total	148	13%	962	87%
Total		538	15%	3,007	85%

Note: The wood chipping, veneer, plywood and prefabricated wooden building manufacturing sectors are not included in this table since they employ no or few women (less than 10) according to the 2021 ABS Census.

Source: ABS Census of Population and Housing, 2021, TableBuilder

3.2.3 Aboriginal and Torres Strait Islander participation

Aboriginal people make up 3% of the workforce in the forest and wood products sectors in South and Central Queensland. The sector with the largest number of workers of Aboriginal descent is timber processing (51 people), whereas the sector with the largest proportion (8%) is forestry support services (Table 4).

There are no records of Torres Strait Islanders working in the forest and wood products industry in the region.

⁵ ABS Census 2021

Table 4: Aboriginal workforce participation by industry sector, 2021, South and Central Queensland

Industry sector	ANZSIC 4-digit level Industry of Employment	Indigenous Status			
		Aboriginal		Non-Indigenous	
		Employees (No)	Proportion (%)	Employees (No)	Proportion (%)
Forestry and support services	Forestry	3	1%	355	99%
	Forestry Support Services	16	8%	192	92%
Harvesting	Logging	6	3%	208	97%
Wood product manufacturing	Log Sawmilling	51	4%	1,123	96%
	Timber Resawing and Dressing	3	1%	218	99%
Other Wood Product Manufacturing	Wooden Structural Fitting and Component Manufacturing	15	2%	889	98%
	Other Wood Product Manufacturing, nfd	6	3%	229	97%
Total		100	3%	3,214	97%

Note: The wood chipping, veneer, plywood and wooden structural fitting and component and prefabricated wooden building manufacturing sectors are not included in this table since they employ no Indigenous people (less than 10) according to the 2021 ABS Census.

Source: ABS Census of Population and Housing, 2021, TableBuilder

3.3 CURRENT JOB ROLES

The largest occupation group in the forest and wood products industry in South and Central Queensland is labourers and machinery operators and drivers (each accounting for 25%), followed by technicians and trade workers (24%) and managers (11%) (Figure 4).

Table 5 presents a breakdown of the main occupations in terms of employment size and industry sector.

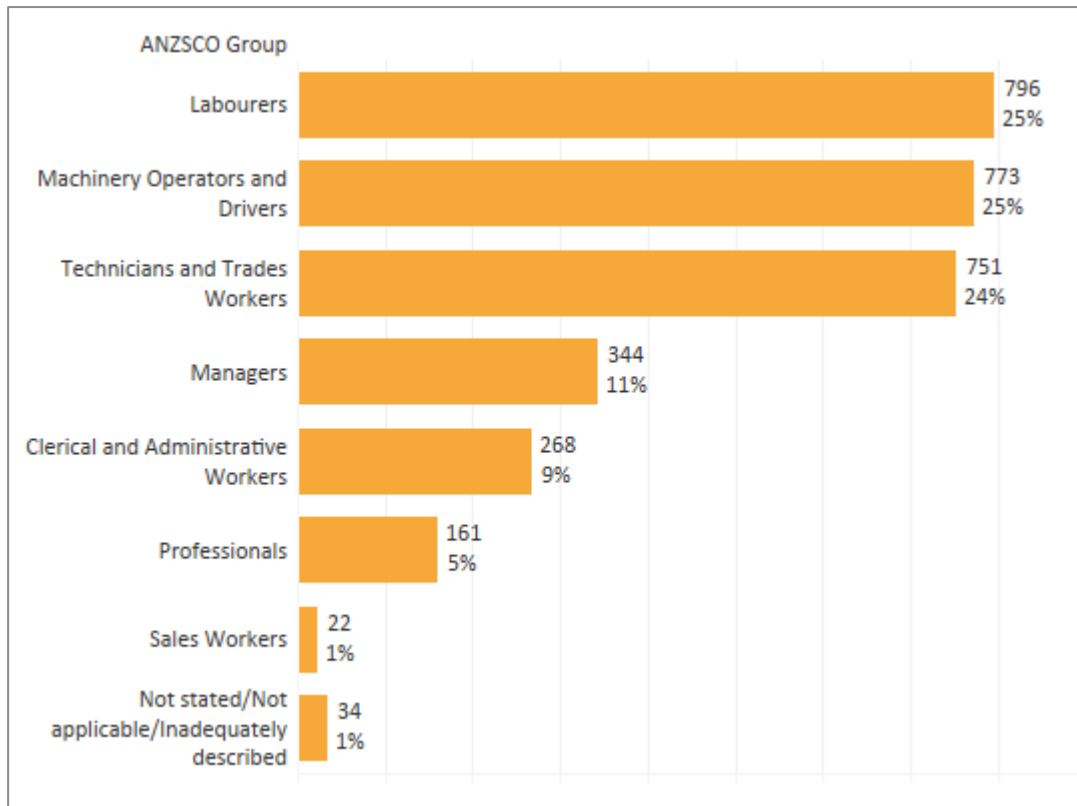
Professional foresters, forestry workers and mobile plant operators make up roughly half of the forestry and support services workforce (17%, 26% and 7%, respectively).

Truck drivers, log plant operators and tree fellers make 50% of the harvesting sector.

Machinery operators and forklift and loader drivers make up 30% of the workforce in wood products manufacturing, while sawmill and timber yard workers account for 25%.

Cabinetmakers and carpenters play a critical role in the production of wood joinery and timber structural components.

Figure 4: Distribution of occupation groups in the industry, 2021, South and Central Queensland



Source: ABS Census of Population and Housing, 2021, TableBuilder

Table 5: Main occupations in the industry, 2021, South and Central Queensland

Industry sector	ANZSCO Group	ANZSCO 6-digit level Occupation	Employees (No)	Proportion (%)
Forestry and support services	Labourers	Farm, Forestry and Garden Workers nec	64	24%
		Forestry Worker	51	
	Machinery Operators and Drivers	Agricultural and Horticultural Mobile Plant Operator	18	7%
		Logging Plant Operator	18	
	Professionals	Forester	80	17%
	Clerical and Administrative Workers	Program or Project Administrator	15	3%
	Managers	Production Manager (Forestry)	17	4%
	Other*		256	53%
	Sub-total		484	100%
	Harvesting	Labourers	Tree Faller	31
Machinery Operators and Drivers		Truck Driver (General)	37	35%
		Logging Plant Operator	36	
Other*			105	50%
Sub-total			209	100%

Industry sector	ANZSCO Group	ANZSCO 6-digit level Occupation	Employees (No)	Proportion (%)
Wood product manufacturing	Labourers	Sawmill or Timber Yard Worker	307	26%
		Wood and Wood Products Factory Worker	43	
		Factory Process Workers nfd	17	
	Machinery Operators and Drivers	Sawmilling Operator	209	31%
		Other Wood Processing Machine Operator	97	
		Forklift Driver	88	
		Loader Operator	26	
		Machine Operators nfd	24	
	Technicians and Trades Workers	Electrician (General)	34	9%
		Fitter and Turner	29	
		Fitter (General)	27	
		Wood Machinist	23	
		Saw Doctor	15	
	Clerical and Administrative Workers	Office Manager	22	3%
		General Clerk	20	
	Managers	Production Manager (Manufacturing)	62	6%
		Manufacturer	19	
	Other*		317	22%
	Sub-total		1,413	100%
Other Wood Product Manufacturing	Labourers	Wood and Wood Products Factory Worker	42	7%
		Sawmill or Timber Yard Worker	17	
		Product Assembler	16	
	Machinery Operators and Drivers	Truck Driver (General)	18	3%
		Forklift Driver	17	
	Technicians and Trades Workers	Cabinetmaker	394	48%
		Joiner	35	
		Carpenter	19	
		Architectural Draftsperson	18	
	Clerical and Administrative Workers	Office Manager	24	6%
		General Clerk	21	
		Accounts Clerk	19	
	Managers	Manufacturer	29	6%
		Production Manager (Manufacturing)	28	
	Other*		294	29%
Sub-total		1,008	100%	
Sub-total		3,149	87%	
Not stated or able to be classified		451	13%	
Total		3,600	100%	

* Other include occupations in which the industry employs 14 or less people in South and Central Queensland according to the 2021 ABS Census. Source: ABS Census of Population and Housing, 2021, TableBuilder

4 WORKFORCE DEMAND (PRESENT AND FUTURE)

This section provides an overview of workforce demand in the forest and timber industry in South and Central Queensland. It outlines what additional workers and roles businesses must recruit to deliver on their goals now and in the future. This information is derived from industry interviews.

4.1 JOB VACANCIES

Industry interviews have revealed that occupations such as forester, harvester operator, saw technician (known as saw doctor), wood machinist, mechanical fitter, truck driver and frame and truss estimator and detailer are in demand, yet difficult to fill. These roles are essential to the daily operations of businesses in the industry and require highly trained professionals. Some businesses have been able to outsource more specialised mechanical and electrical work, for instance, yet at least one fitter is needed on-site for routine equipment maintenance and repair.

The labour shortage for these occupations has been around for a long time; however, it has been exacerbated recently due to a combination of factors, including COVID pandemic, the mining industry's strategies to attract trade workers, and a lack of institutions and trainers that offer formal training.

Table 6 lists job vacancies reported in South and Central Queensland by each industry sector.

Mixed responses have been received regarding the availability of general labour to occupy support roles in production operations, as follows:

- One business indicated it is difficult to find general labour, particularly in locations where they compete with other industries and large companies. To overcome the labour shortage, they had to hire workers from the Pacific islands under the Pacific Australia Labour Mobility (PALM) scheme.
- Other businesses indicated that it is difficult to find people who are driven to work in the industry and carry out the tasks for which they were recruited. When the job involves herbicides, long drives to forestry sites, and more physical effort than expected, people often quit their positions.
- Some other businesses said that filling job vacancies rarely posed a problem due to low employee turnover. When resignations did occur, they involved low-skilled workers who are easy to replace, as opposed to lead operators or fitters.

Many businesses have reported low employee turnover, which was attributed to a workplace culture that is supportive of workers' safety and welfare. An example of this was provided, with three operators leaving the business to work in a different industry but returning later due to a strong emphasis on safety in the industry.

Table 6: Job vacancies, South and Central Queensland, 2022 (Number of respondent businesses, 13)

Sector	Occupation
Forestry	Foresters
Forestry support services	Foresters
	Forest workers (for spraying regrowth eucalypts in production forests)
	Harvester operators (for thinning regrowth eucalypts in production forests)
	Skidder operators
	Mechanical fitters
Harvesting	Harvester operators
	Skidder operators
	Mechanical fitters
Haulage	Truck drivers
Sawn timber manufacturing	Saw doctors
	Wood machinists
	Mechanical fitters
	Electricians
	Forklift operators
	Support workers (mill hands)
	Truck driver
	Benchman
	Pole plant operators
	Treatment plant operators
Financial accountant	
Wood Panel manufacturing	Engineers
	Mechanical fitters (technicians)
	Electricians
Timber frame and truss manufacturing (machinery and technology supplier)	Stumping and machinery production workers
	Estimator and detailer
	Engineering services delivery officer
Pellet manufacturing; landscaping product manufacturing	Nil

Source: South and Central Queensland Regional Forestry Hub interviews, 2022

4.2 FUTURE DEMAND FOR LABOUR

Businesses in the industry predict that they will need to hire more people in a variety of job categories over the next five years (Table 7). This demand for labour is contingent on market and legislative forces, as well as individual businesses' expansion or goals for improvement. For instance, some businesses may invest in new plantations or manufacturing lines/facilities for the development of new products (such as glulam and wood pellets), while for others may focus on improving their operations through technology upgrades, process optimisation, and resource efficiency. These business goals in South and Central Queensland are further discussed below.

Forestry

New plantations are being planned, which in conjunction with the need to manage the growing risks associated with plantation management, will lead to an increased demand for nursery workers, tree planters, silviculture employees, and foresters. It is thought that if management practices are improved through process improvements and technology, it might be possible to do more with fewer people and reallocate some current workforce to other roles.

Harvesting and haulage

Harvesting in established plantations is projected to grow in the next few years, requiring more harvesting operators.

A harvesting and haulage business estimates that they will need to hire an additional 10 harvesting operators and 20 to 30 truck drivers within the next three to five years to meet demand, replace retiring workers, and fill vacancies due to the high turnover rate among truck drivers.

Another harvesting business intends to expand their services to include site preparation, requiring them to hire more heavy machine operators. Given the challenges of finding a skilled workforce, they will seek both experienced and entry-level candidates.

Reports suggests that there is a growing interest in purchasing large quantities of forest residues (biomass for energy) from harvesting and vegetation regrowth management (thinning). This will lead to a further increase in demand for harvesting equipment operators, such as harvesters, skidders, loaders, excavators, and wood chippers. Notably, this type of work a lower level of skills and experience than log harvesting operators for timber production.

Sawn timber manufacturing

If future log contracts and production targets increase, sawmills will require more process operators. However, this increase in labour demand depends on how businesses plan to use technology and streamline processes to lower labour costs.

To improve product quality, large sawmills are continuing to implement scanning technology and automation. This will create new job roles that focus on manufacturing and lean-driven activities, such as technicians for quality control and continuous improvement. Manual timber graders will no longer be needed in these sawmills, allowing the transfer of these workers to other positions.

A new glulam facility is expected to become operational in the region by the end of 2023. When all four phases of construction are complete, the production line will require approximately twenty-five technical staff members to run the finger jointing, laminating, and drying processes. This will be the second glulam facility in the region.

Timber frame and truss manufacturing (machinery and technology supplier)

A key manufacturer and provider of metal connectors, software, machinery and engineering services to timber fabricators is planning to expand their capacity by 50%. To achieve this, they will need to hire 3 estimators and detailers, as well as additional machinery production workers, in the coming years.

Pellet manufacturing

A new pellet mill will be constructed in the region, and four operators will be required to run its operations. These positions are divided into two specialised roles: quality control technicians and hybrid technical-mechanical specialists. The skills necessary for these roles are process-specific and can be taught both on-site and off-site in conjunction with the existing pellet manufacturing plant.

Table 7: Occupations for which businesses predict an increase in demand and recruitment over the next five years, South and Central Queensland (Number of respondent businesses, 13)

Sector	Occupations
Forestry	Foresters (in-field officers for supervising seasonal and permanent staff)
	Forestry workers (nursery, tree planting, tree tending)
Forestry support services	Harvester operators
	Skidded operators
Harvesting (and Haulage)	For forest residue harvesting for bioenergy and bioproducts
	Harvester operators (experienced and entry level)
	Loader operators
	Excavator operators
	Wood chipping machine operator
	Truck drivers
Sawn timber manufacturing	Production workers
	Quality control technicians
	Continuous improvement technicians
	Pole yard operator
	Loader/Forklift drivers
	Timber graders
	Docking saw operators
	Benchman
Treatment plant operators	
Wood Panel manufacturing	Admin staff
	No significant changes are expected in the composition and level of the workforce during the next five years
Timber frame and truss manufacturing (machinery and technology supplier)	Estimators and detailers
	Machinery production workers
Pellet manufacturing	Quality control technicians

Sector	Occupations	
	Hybrid technical-mechanical fitter	
Landscaping products manufacturing	Wheel loader operators	
	Excavator operators	Dependent on supply (the volumes of bark available)
	Truck drivers	

Note: A number of participant businesses indicated that they have no current plans to hire additional employees in the near future, either because their organisation is focused solely on technology upgrades and business refinement, or because they have recently expanded and reached their workforce capacity for three shifts.

Source: South and Central Queensland Regional Forestry Hub interviews, 2022

4.3 FUTURE RETIREMENTS

Over the next 5 years, there will be an influx of workers retiring, creating additional challenges for managing future workforce needs. These workers are not only leaving behind their duties but also taking with them valuable skills, knowledge, experience, and relationships.

Interviewed businesses anticipate a gap of more than 70 skilled workers during the next 5 years due to retirements, which equals about 5% of their total workforce (i.e., 1,500 employees). This is outlined in Table 8. Notably, many of these workers may have been employed in the industry for 20 and 30 years.

Table 8: Retirements over the next five years, South and Central Queensland (Number of respondent businesses, 9)

Occupation	Cumulated number of reported retirements
Foresters and forest technician (management, science, fleet management)	26
Truck drivers	6+
Mechanical fitters	3
Sawmill process operators and trade people	31
Kiln manager	1
Quality coordinator	1
Wood machinist, treatment plant manager, timber grader, crane truck driver	NA

Source: South and Central Queensland Regional Forestry Hub interviews, 2022

5 SKILLS AND TRAINING NEEDS (PRESENT AND FUTURE)

This section identifies the skill development needs of the forest and timber industry in South and Central Queensland. These are skills that employers believe their workforces need to acquire or improve to be successful and efficient in their roles, both now and in the future. This information was gathered through industry interviews.

5.1 SKILL DEVELOPMENT NEEDS

Businesses in the industry are generally committed to continuous employee development. Most use in-house subject matter experts and resources for providing on-the-job training for the majority of skill areas. Training providers are typically used for traineeships and apprenticeships in trades like mechanics, wood machinists, and saw technicians, as well as harvesting machine and other mobile plant operations such as a forklift, where a work permit is required.

Additionally, businesses occasionally use formal training and qualifications to upskill, recognise and assess the skills of existing employees in preparation for promotion, or to give them the opportunity to advance their career by moving up or to a different role within the business.

Some businesses mentioned that investing in apprenticeships for trade worker is no longer cost-effective, as people take advantage and move to higher-paying employment elsewhere. Others suggested that apprenticeship programs could help with the shortage of skilled trade workers if suitable mentors can be found or designated.

Table 9 outlines the skill areas businesses are focusing on now and in the future, to provide workers with the necessary knowledge for effective and efficient operations. This training will also improve workforce capabilities to support business activities and achieve business goals. These skills and training requirements are in addition to those needed to fill the current and future workforce demand (gaps) identified in a previous section.

5.2 METHODS PREFERRED FOR TRAINING DELIVERY

Whether formal or informal, on-site training remains the most preferred method of training delivery among businesses. Some businesses believe that it is easier to coordinate workers and train more workers in a group setting. Other businesses have found that employees learn better when they are demonstrated and perform tasks in the workplace.

A business suggested that the method of training delivery should be based on the learner's job role as follows. For specialised occupations such as wood machinists, saw technicians and quality control and scanning technicians, training should take place outside of the workplace so that this specialised workforce can engage with their peers and form a network. Instead, production employees and front-line managers may benefit from on-site or blended training to enable team building.

A few businesses stated that any training method that provides the necessary skills is acceptable, but it should take place in Queensland to minimise travel logistics and reduce workflow disruption. Additionally, one business reported difficulties in making training arrangements with a training provider due to a lack of staff available to manage the task.

Table 9: Future skills and training needs for existing employees, South and Central Queensland (Number of respondent businesses, 13)

Industry sector	Required skill/training	Skill level	Training type	Targeted job roles	Reasons for the skill and training need
Forestry	Forester degree	Qual ⁶	Formal / Informal	Entry-level foresters	Foresters will continue to need traditional skills to manage plantation operations and silvicultural programs and understand contracts and contractual obligations
	Skill sets in technology use and digital data management and application ⁷	MC ⁸	Formal / Informal	Forestry technicians	The skill sets of today in the plantation sector will not be the same in the next five years but defined by technology and digital skills for data management and application.
	Skill sets in using aerial spraying and drones	MC	Formal / Informal	Forestry technicians	The shift from manual to mechanised tree planting and silviculture practices, including the use of aerial spraying and drones, will influence the skill set needed for plantation management in the future.
Forestry support services	Chainsaw operations	UoC ⁹	Formal	Forest workers	An ongoing need
	Chemical handling	UoC	Formal		
	Knowledge of trees and forest management	Basic	Formal / Informal	Harvesting operators	Harvesting is a specialised area and requires knowledge of trees to make good decisions
	Report writing (using digital technology)	Basic	Formal / Informal	Forest workers Harvesting operators	To assist the management in writing and completing reports
	GIS	Basic	Formal / Informal	Young forester / Forest technicians	Using GIS tools are essential in forestry operations
	Business management	Basic	Formal / Informal	Management positions	To help managers with forestry degree to run a business and manage employees

⁶ Qualification

⁷ Investing in a younger generation that has had some level of exposure to digital technology applicable to forestry applications but lacks traditional forestry experience may be an alternative and viable option.

⁸ Micro credential

⁹ Unit of Competency

Industry sector	Required skill/training	Skill level	Training type	Targeted job roles	Reasons for the skill and training need
	Production burning (as part of vegetation regrowth management)	UoC	Formal	Forest workers	According to feedback, finding a training course for controlled burning is challenging
Harvesting (and haulage)	Operate harvesting machine with winch-assist system	UoC	Formal / Informal	Harvesting operators	Businesses invest in tethering equipment and skills for harvesting on steep terrain
	Business management (with a focus on communication, critical thinking and problem solving)	Basic	Formal / Informal	Managers Senior operators	To give senior staff a career path to management
	Operate harvesting machines (including mechanical felling, log extraction and loading)	UoC	Formal	Harvesting operators	To upskill new and existing workers; to multi-skill workers in operating different types of machines, allowing them to fill in for open positions when they arise
	Transport logs using trucks	UoC	Formal	Truck drivers	
Timber processing	Lean manufacturing	Basic	Formal / Informal	Front-line managers Team leaders	For efficiency and waste reduction
	Leadership and people skills	Basic	Formal / Informal	Front-line managers Team leaders	To better manage interpersonal relationships with team members because attitudes and behaviours take up the majority of leaders' time at work
	Data analysis	Basic	Formal / Informal	Process operators Quality control technicians	Technology makes more information available, which can be valuable if it is used
	Programming and electronics	Basic	Formal / Informal	Technicians	To enable automation and robots
	Wood science	Basic			
	Quality control	Basic			
	Drying techniques (operations)	UoC	Formal / Informal	Process operators	To improve the skill level of all process operators
	Digital technology use	Basic			
	Visual grading - hardwood	UoC			
Timber treatment techniques (operations)	UoC				

Industry sector	Required skill/training	Skill level	Training type	Targeted job roles	Reasons for the skill and training need
	Bench Operation/Sawyer/Line Bar & Sizing Carriage Operation	UoC			
	Finger jointing	UoC			
	Chainsaw	UoC			
	Front-end loader	UoC	Formal	Log yard operators	For upskilling. Planning to enroll 3 employees next year
	Forklift	UoC	Formal		
	Fire safety	UoC	Formal	All job roles	Every staff member receives fire training; the company organises training once per year
	Certificate III in Timber processing	Qual	Formal	Process operators	Planning to enrol employees in the next year depending on log contracts
	Operational risk	Qual	Formal	Operational risk manager	For upskilling leaders. Qualifications required include Certificate IV in Environmental Management and Sustainability / Certificate IV in Environmental Monitoring and Technology; Certificate IV in Timber Processing
	Leadership	Qual	Formal	Site manager	
Other wood products manufacturing	Chemical use	UoC	Formal	Process operators	Occasional training
	WHS				
	Front-end loader				

Source: South and Central Queensland Regional Forestry Hub interviews, 2022

Forestry and harvesting businesses strongly believe that harvesting simulators should be used as a training tool to make entry-level learning more efficient in the future. It was mentioned that multifunction is the most challenging aspect to learn in harvesting, but a simulator can be very useful in this regard.

In order to address the shortage of subject matter experts in the VET sector, many businesses expressed an interest in utilising their technical expertise in partnership with training providers to provide specialised training and skill assessment to both their own employees and those of other enterprises. It was emphasised that to foster skill development and industry growth, businesses must cooperate and set aside their differences, as the knowledge and expertise available in the industry are limited.

In addition, a suggestion was made to enlist technical experts nearing retirement to aid in training delivery and mentoring. As these people are deeply passionate about their field, they would be pleased to share their knowledge and expertise.

5.3 SKILLS REQUIRED FOR A START IN THE INDUSTRY

When recruiting for entry-level positions, businesses look for certain skills and qualities which include work ethics, work, health and safety awareness, basic industry knowledge, literacy, numeracy and digital skills to use technology and enter data, pre-employment medical assessment, physical capability, and willingness to learn and progress in the company and/or industry. Table 10 outlines these and other skills and attributes required by each industry sectors.

Once recruited, new workers go through “onboarding”, which includes a company induction and job-specific training for using machinery and equipment. One business found that providing new workers with brief information about trees, logs and timber increases their interest in the business’s processes and encourages them to ask questions.

During employment, workers are given the opportunity to develop and be recognised for their technical and specialised skills through employee performance and development reviews, as well as a variety of programs that are relevant to both the individual worker and the organisation as a whole.

Unlike other industry businesses, manufacturing and providing metal connectors, software, machinery, and engineering services to timber frame and truss fabricators requires specialised work and experienced individuals, so entry-level candidates are not hired. This makes it challenging for the operations, as there is no opportunity to learn technical skills on the job. The business capitalises on those who already have expertise in frame and truss businesses, yet they too have difficulty finding and training workers, particularly estimators and detailers.

Table 10: Entry-level skills and attributes sought by employers, South and Central Queensland (Number of respondent businesses, 13)

Sector	Skills and aptitudes sought at entry-level
Forestry & Forestry support services	Be physically fit
	Possess licences to use chemicals and chainsaws
	Have or is willing to receive first aid training
Harvesting (and haulage)	Have work history or background in agriculture, civil construction, truck driving or related field
	Awareness of what it entails to work in the field
	Ability to work independently
	Willingness to perform outdoor jobs
	Experience in loading trucks (desirable)
Sawn timber manufacturing	WHS awareness obtained from any manufacturing or retail setting
	Literacy, numeracy, and digital skills to using technology and enter data
	Work ethic (reliability)
	Pre-employment medical assessment, including alcohol and drug test
	Physical capability
	Basic industry knowledge
Wood Panel manufacturing	Job ready skills (desirable) - timber grading and identification, basic operation of power hand tools (saws/planers/chainsaws), forklift operation
	Problem solving
	Readiness to learn and progress in the company
	Basic technical understanding of machinery and processes
	Work ethic
Landscape product manufacturing	Teamwork ethic
	Five years of experience and a valid licence for loading and unloading operators (production positions)

Source: South and Central Queensland Regional Forestry Hub interviews, 2022

5.4 SUPPORT NEEDED FOR WORKFORCE TRAINING AND DEVELOPMENT

Businesses can improve their decision-making about workforce development by accessing different support services. According to industry interviews, these support services should include information about available training programs, government training subsidies, coordination of training and guidelines for conducting workforce development plans (Figure 5).

In addition, it was emphasised that there is an urgent need to address the lack of training options available to the industry in the region and to develop training capacity and capabilities more broadly.

“There are very few timber industry trainers or training organisations in our local area or in QLD in general.” (Participant from a hardwood sawmill)

“Industry-specific training, which sits outside of just our trade-specific skills. To increase the general knowledge and overview of our industry - and related industries - whether upstream or downstream of our process.” (Participant from a softwood sawmill)

“Making training more relevant to each business type. More on the job training for trainers and trainees within their own business as well as offsite training. Losing the TAFEs years ago had a bigger impact than most understand for the timber industry.” (Participant from a hardwood sawmill)

Businesses will benefit from any support that enables them to ensure that their employees are on the right training path; form partnerships with new training providers and other organisations that can assist in workforce development; and access and select training providers that meet their needs best. The following remarks further illustrate this point.

The lack of post-secondary programs and options for training new foresters is a training issue that is widely discussed in the forest sector. Foresters are in high demand and short supply, making the situation even more urgent. The last educational institution to offer a forestry degree was Southern Cross University, which may have just produced the last generation of foresters. As a result, it was suggested that the forest sector needs a mechanism to access or import qualified foresters, and that the government should support our industry by creating policies that make it easier to temporarily import qualified foresters until the local education system has the infrastructure and resources to train qualified foresters domestically. Additionally, some industry professionals believe that the shortage of foresters may be a factor for the public’s negative perception of forestry operations, as the only people who can accurately explain that the sector is sustainable are forestry graduates, not environmental or ecological science ‘forester’ graduates.

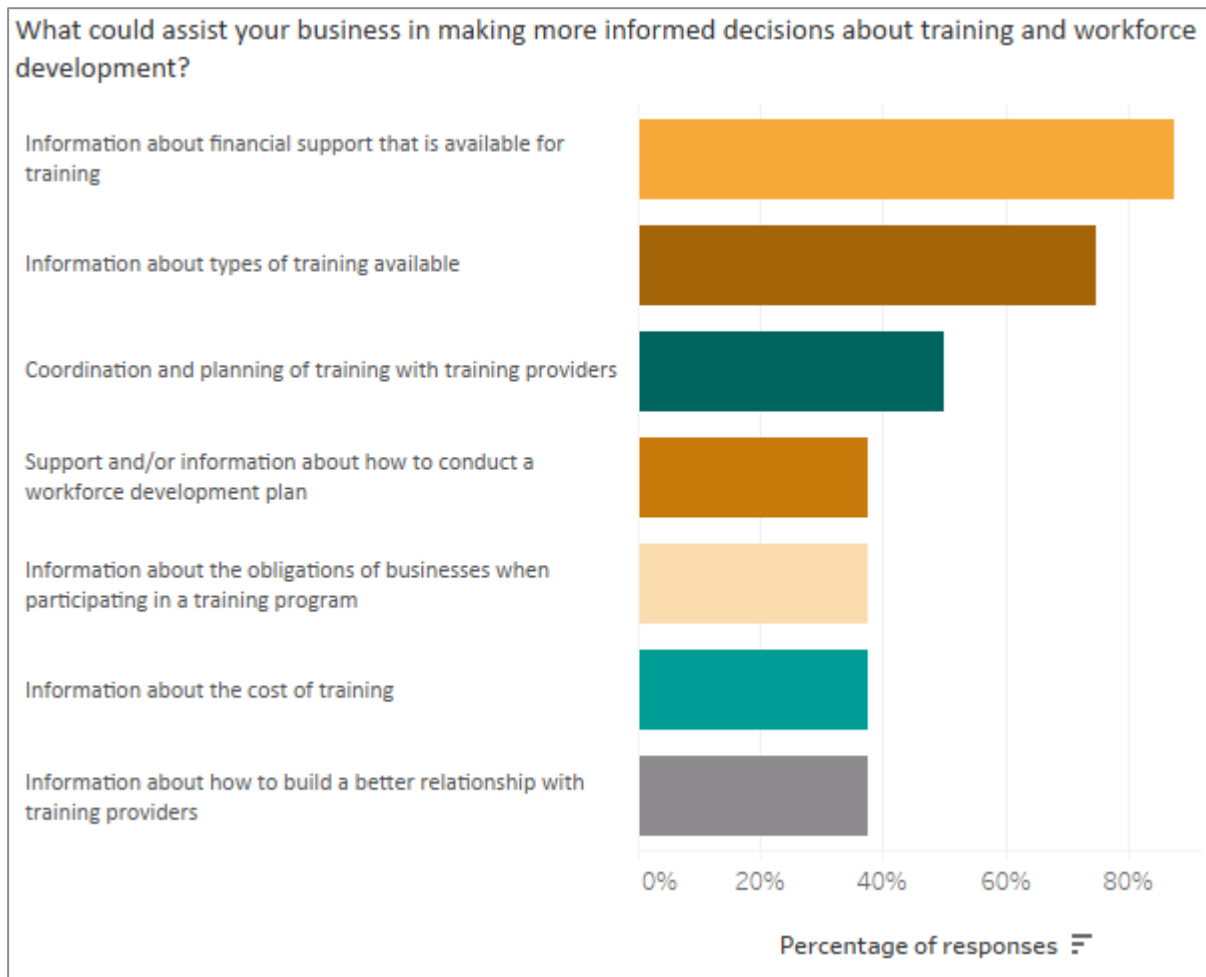
Businesses in harvesting and haulage raised concerns about the lack of RTOs with capacity to provide training to harvesting operators and truck drivers, who are in high demand. Compared to other types of heavy equipment operators such as skidder, excavator or loader operators, harvester operators and log truck drivers are held to much higher standards in terms of their level of skills and training. To overcome the challenge presented by the shortage of skilled workers, some businesses are considering providing training to operators of skidders, excavators, and loaders so they can become skilled and step into these positions. However, they still need to deal with the lack of training providers. As a result, one business has decided to enrol four of its employees through a training and assessment (TAE) course, and they believe that sharing workplace trainers is the only way to solve the skills and training issues facing this sector. In addition to specialised training, training providers are seen as beneficial when it comes to providing induction training in areas such as contract obligations, fire awareness and industry safety, helping new workers become job-ready.

Concerns about the availability and ability of RTOs to provide high-quality courses have been cited as a factor in Queensland's decision not to join the Safe and Skilled national industry program for harvesting operators, established by the Australian Forest Products Association and the Australian Forest Contractors Association.

A business in the timber frame and truss fabrication sector reported a nationwide shortage of estimators and detailers. To address this, they have proposed better access to career pathways, such as promotion in schools and financial incentives to train enterprise trainers and assessors. Despite the fact that this business had to import these skills, employing a team of 10-12 people who work from their Kuala Lumpur office, they acknowledge that local recruitment would be more efficient.

Since 2019, the frame and truss sector has been trying to create a short course in Victoria and update the national VET qualifications to support local skill development. Unfortunately, these efforts have been hampered by a lack of trainers.

Figure 5: Support required to training and workforce development in the industry, South and Central Queensland (Number of respondent businesses, 8)



Source: South and Central Queensland Regional Forestry Hub survey, 2022

6 ABILITY TO ATTRACT, RECRUIT AND RETAIN WORKERS

This section identifies the challenges that the forest and wood products industry in South and Central Queensland face when attracting and recruiting new workers. To gain insight into this issue, interviews and surveys were conducted with industry businesses.

6.1 CHALLENGES IN FINDING AND RECRUITING WORKERS

Finding individuals with a good work ethic and willingness to work in our industry is an issue experienced by many businesses. Wage levels in the industry are generally attractive but can become less competitive due to wage spikes in booming sectors, and the general public tends to have a negative perception of our industry, unaware that every tree felled is replanted and the industry use state-of-the-art equipment.

Interviewed businesses identified a range of factors that make it difficult to find and recruit employees, with external factors being the most common. These include competition from other industries and liveability, such as public infrastructure in regional and remote areas. Other barriers to attracting people to the industry included public awareness and perception of the industry, jobs, and wages, as well as a lack of school-based forestry traineeships or related topics in school curricula (Figure 6).

“There is fierce competition between timber businesses for skilled workers such as wood machinists etc. There is also competition from other manufacturing businesses such as Downer and the mining industry.” (Participant from a hardwood sawmill)

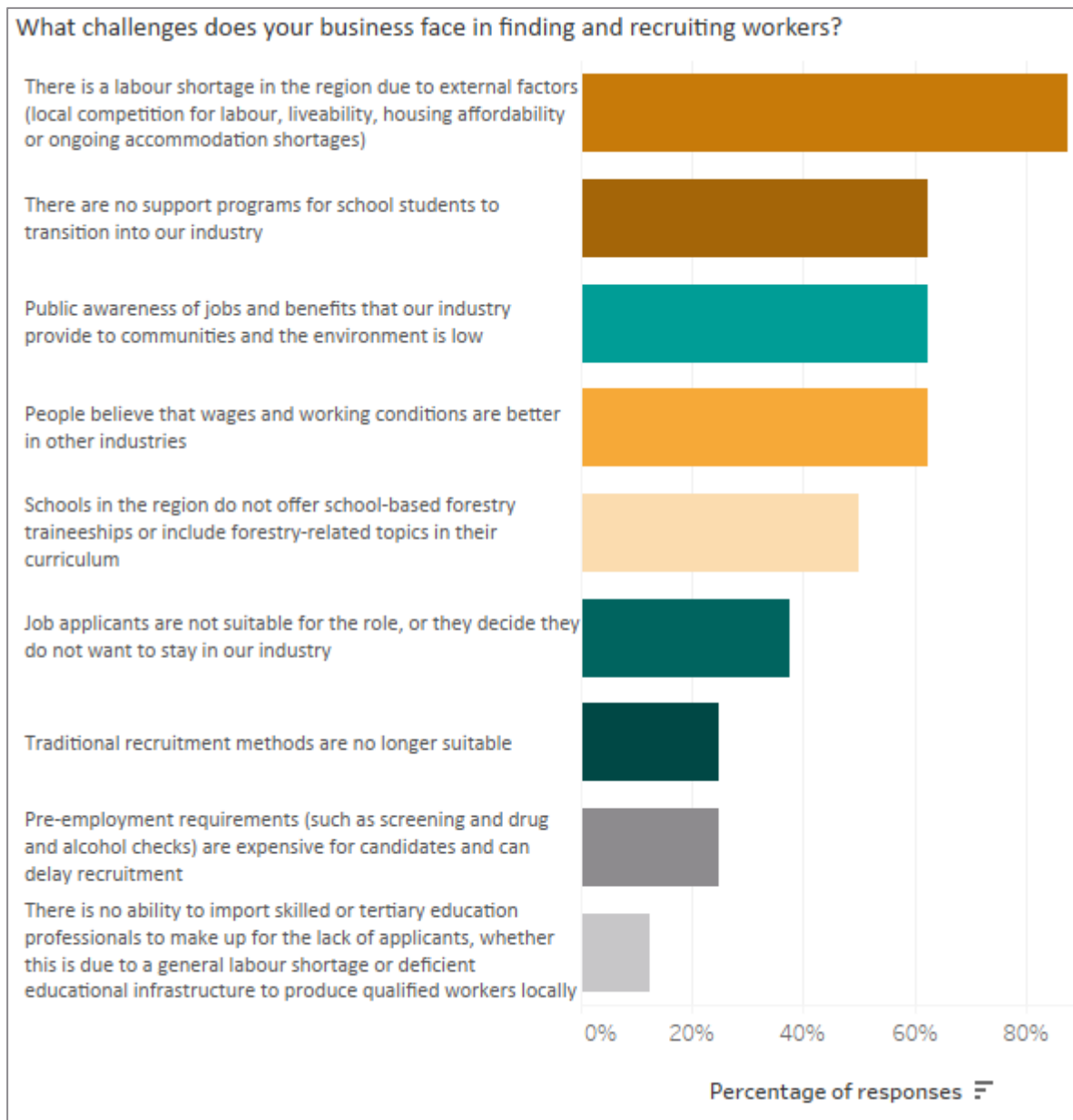
“General lack of understanding of what modern sawmilling and related fields entail, perception that we are still using horse-drawn carts and vintage two-man crosscut saw blades” (Participant from a softwood sawmill)

A theme that also emerged from industry interviews was the need to find new ways to attract motivated individuals to work in forest and wood products operations, and the following suggestions were made.

The interviews revealed the need to attract more motivated individuals to the industry. To achieve this, it was suggested conveying that forest and wood products operations are no different from other highly automated sectors. Rather than emphasising what makes this industry unique, the focus should be on the interesting aspects of automation and equipment. Examples include harvesters with on-board computers, CNC, timber scanning technology, and sawmill equipment alignments.

It was also suggested that the industry needs to improve its communication with prospective employees by providing a clear picture of what it entails to work in the industry. This includes information about the day-to-day work environment and the skillsets needed to succeed, so that prospective employees can make informed decisions before employment. A major problem identified is that our industry lacks demonstration of its workplaces. Additionally, it was suggested that we need to improve our ability to replicate successful models and determine the optimal learning approach for each employee.

Figure 6: Reported challenges in finding and recruiting workers, South and Central Queensland (Number of respondent businesses, 8)



Source: South and Central Queensland Regional Forestry Hub survey, 2022

6.2 CHALLENGES IN RETAINING SKILLED WORKERS

Businesses' ability to retain skilled workers appears to be affected by several factors. These include a lack of succession and workforce development planning, and a disconnect between what applicants anticipate and what working in the industry is actually like (Figure 7). Wages that cannot compete with mining and other booming sectors are also mentioned as a possible factor.

"Succession planning is lacking in the technical fields, what succession planning is in place is solely focused on leadership succession and redundancies. Very little to no focus on key technical skills - which have a bigger impact and are harder to backfill" (Participant from a softwood sawmill)

"Constant pressure to increase wages. Employees have ample options to move to another job/industry for more money" (Participant from a harvesting business)

"In QLD we manage to keep most of our skill base. Recruiting new staff is difficult based on unequal pay comparisons in other sectors (mining) we lose too many staff to the relatively new industry as "Carers". It's unbelievable the impact this has had across Australia." (Participant from a hardwood sawmill)

"We struggle to compete with mines wages." (Participant from a harvesting and haulage contractor)

"We mainly loose staff due to age and health." (Participant from a frame and truss machinery and technology supplier)

Businesses can prepare for the future by using workforce development planning. This will help them to respond to workforce needs, reduce employee turnover, attract staff to key roles, reduce skills shortages, and increase job satisfaction. It also helps to achieve better employee engagement.

Workforce development planning involves the systematic identification, analysis, and planning of human resources. Strategies such as mentoring and training/skills development programs can be established as part of a succession plan. This allows workers to gradually take on roles and tasks of critical importance within the business.

To retain workers, it is important to provide prospective employees with the chance to gain firsthand experience in their chosen field. This will enable them to make well-informed decisions before committing to employment.

Figure 7: Reported challenges in retaining skilled workers, South and Central Queensland (Number of respondent businesses, 8)



Source: South and Central Queensland Regional Forestry Hub survey, 2022

7 ACCESS TO TRAINING

This section focuses on training providers approved to deliver forest and wood products qualifications in Queensland. It also looks at the delivery challenges and opportunities for industry collaboration. Data for this section has been gathered primarily through interviewing training providers.

7.1 FORMAL AND NON-FORMAL TRAINING

Businesses provide training to their workforces in various settings: formal, non-formal and informal.

Formal training involves attaining competency, being evaluated on these skills and knowledge, and receiving a certificate from an RTO.

Employers require formal training for their employees, both current and prospective, in the following situations:

- at the entry-level, to ensure the employee has the necessary skills to do the job safely and effectively
- when a work licence is needed in order to perform the job, or if the job is deemed to be a high-risk activity such as using a chainsaw to cut, trim or fell trees
- for compliance with legislative and industry obligations regarding workplace health and safety and the environment
- for learning a trade such as mechanical or wood machinist and saw technologist trades
- for career progression
- to formalise skills that have been acquired through experience at the workplace (recognition of prior learning).

In 2020 and 2021, Queensland had nearly 3,000 enrolments in around 80 short courses for skills in forest and wood products operations (Attachment 2). This does not include enrolments for manual chainsaw operation and four-wheel drive training, which are sought after by many other industries.

Non-formal training is prevalent in our industry. These programs are usually structured and do not lead to formal certification. They can include professional development programs with a technology supplier, an internal or external subject matter expert, or a training provider; external webinars on a work-related subject; and forums, expos, and conferences pertinent to the industry.

State and federal industry groups and bodies also provide access to a range of non-formal training programs. For example, Timber Queensland and Forestry Australia's National and Queensland Divisions offer free technical webinars. Responsible Wood also offer workshops and meetings, and Frame and Truss Manufacturers Australia (FTMA) and Forest and Wood Products Australia (FWPA) provide a webinar series.

Informal training occurs in every workplace through inductions and meetings about company values, health and safety regulations, and other compliance requirements. Additionally, standard operating procedures (SOPs) are applied and maintained regularly, coaching and mentoring are provided, and employees are exposed to learning situations in the workplace on a regular basis.

7.2 TRAINING PROVIDERS

Seven private training organisations are registered to provide formal training specific to the forest and wood products industry in Queensland. TAFE Queensland, the state-based training institution, does not offer forest and wood products qualifications, however, they could offer training in technical areas that can be applied across multiple industries. These include transportation, mechanical and electrical trades, forklift licencing, conservation and land management, and wood machining based on furnishing qualifications.

Table 11 lists RTOs authorised to deliver and assess forest and wood products qualifications and/or units of competency in Queensland. These training organisations typically provide the most in-demand courses associated with a qualification by employing their own trainers or engaging external trainers through third-party agreements.

Businesses are advised to contact the relevant RTO to confirm the availability and delivery of training products, and to discuss their training needs. The information needed by training providers to recommend and offer a training course is described in the section below.

Table 11: Training providers approved to deliver forest and wood products qualifications in Queensland as of December 2022

RTOs approved to deliver in Queensland	Head office	Certificate II in Forest Operations	Certificate III in Forest Operations	Certificate II in Sawmilling and Processing	Certificate III in Sawmilling and Processing	Certificate III in Saw Technology	Certificate III in Wood Machining	Certificate II in Timber Manufactured Products	Certificate III in Timber Manufactured Products	Certificate III in Timber Frame or Truss Manufacture	Certificate III in Timber Systems Design	Certificate IV in Timber Processing	Certificate IV in Timber Systems Design
		FWP20121	FWP30121	FWP20316	FWP30316	FWP31021	FWP31121	FWP20516	FWP30516	FWP30920	FWP31220	FWP40216	FWP40420
Millettia Solutions	QLD	x	x										
Elevated Training	QLD							x					
TABMA Training	QLD				x			x	x	x	x	x	x
Fusion Training Solutions	NSW	x											
TAFE NSW	NSW					x							
Timber Training Creswick	VIC			x	x	x	x						
TAFE Gippsland	VIC				x								

Note: No training provider sought approval to deliver the following qualifications in Queensland as of December 2022:

- FWP30121 - Certificate III in Forest Operations
- FWP30621 - Certificate III in Timber Building Products Supply
- FWP40121 - Certificate IV in Forest Operations
- FWP50121 - Diploma of Forest Operations

Source: training.gov.au

7.3 TRAINING PROVIDER INFORMATION REQUEST

Training providers are willing to discuss and support the industry's training needs. They believe it is essential to bring businesses committed to training together, compile the information required to recommend suitable training programs, and collaborate on solutions for areas where additional capacity is needed. All of this requires an industry-coordinated effort.

Training providers need to consider four key pieces of information when recommending suitable training programs for a business, region, sector or industry. These are:

- **Learner profile** – who/what is their target learner market? Examples may include upskilling of existing workers, new industry entrants, indigenous new industry entrants, pre-employment programs for industry entrants, and school-based traineeships for entry to post-secondary school.
- **Number of learners** – how many workers/individuals require this particular training in the area? It is not economically feasible for training organisations to deliver to one or two workers (see next section). The training needs to be conducted as release training for groups of 6-10 learners at a site agreed upon or made available by businesses or a TAFE campus.
- **Preferred training location** – are there any locations where the training could be delivered? Costs associated with training delivery will be influenced by how easy is to travel to/from that location.
- **Employment opportunities offered to the learner** – if students successfully complete the learning programs, will jobs be accessible right away? For example, what are the employment circumstances (part-time, full-time, seasonal, casual, etc.) and how much lead time, if any, is needed between training and employment?

TAFE Queensland stated that they can submit a case to the relevant government department to create and add a training course to the funded list for an industry that has demonstrated a need for additional training capacity. This is provided that sufficient evidence of business support and number of students exist. An example of this is the caravan industry¹⁰.

7.4 CHALLENGES FACING TRAINING PROVIDERS

RTOs encounter numerous challenges while providing nationally accredited training to our industry. These include learners dispersed over a large geographical area, leading to small student numbers in one location; a low student-to-trainer ratio; and a range of complex, technical jobs and skills which are unique to our industry – requiring access to a business's expensive machinery and an expert trainer.

The forest and wood products industry does not have the volume to support thousands of VET placements, as seen in the service industries, for example.

These challenges are always present in the minds of RTOs as they develop training offerings and evaluate their operations. It is not always cost-effective for RTOs to travel long distances to train and assess a small cohort of learners in their workplaces. Additionally, RTOs struggle to cover the costs of the development that needs to be done before delivering the training, which affects their decision to go ahead with the training.

¹⁰ <https://tafeqld.edu.au/news-and-events/news/2022/recreational-vehicle-apprenticeships-gain-popularity>

Currently, there is a view in the industry that knowledge-based training can be delivered by an RTO in classroom or online. Practical training and assessment can be done internally by workplace trainers and assessors on the job, or externally by trainers and assessors engaged by an RTO. The RTO would then issue Statements of Attainment.

No matter the preferred method of employers (assessment only, hybrid, or more reliant on external trainers from RTOs), better coordination of training design, delivery, and effectiveness can only be accomplished through increased interaction between industry and RTOs.

7.5 THE NEED FOR A NEW GENERATION OF TRAINERS

Working in partnerships to develop trainers and assessors could facilitate suitable and cost-effective training and assessment processes. This would help address the challenge of training providers maintaining a trainer and assessor workforce.

Training providers understand why senior workers may distrust a trainer's expertise; after all, an RTO-based trainer cannot match their years of experience. This mistrust is further exacerbated by the ever-changing nature of jobs due to technological advancements and new work processes, often leave training providers feeling disconnected.

As a result, training providers believe that a new generation of trainers is needed to support vocational education and training in the industry. To ensure that the valuable skills of the aging workforce in the forest and wood products industry is not lost, collaboration must be established to help these workers transition into teaching roles later in their careers.

Training organisations are willing to support businesses and their workers who are motivated to transition teaching. This could mean forming partnerships with RTOs that offer TAE Training and Assessment as a more trade-based qualification, specifically tailored for employees in small enterprises. This can reduce the pressure of completing this qualification. Many RTOs offer TAE qualifications to corporations, in a corporate manner. Additionally, assistance can be provided to the newly trained workplace teachers to take on training responsibilities and guide them through the training process, in accordance with third-party agreements, to meet compliance requirements.

It is assumed that the industry desires a long-term solution to its training needs, rather than short-term fixes for immediate requirements. Thus, it is believed that workplace trainers will not thrive without total cooperation and continued support from the business community. For an employer to take part in this process, they must be prepared to release the employee from their usual duties and modify the job requirements so that they can take part in training activities.

8 RECOMMENDATIONS

This study has resulted in 13 recommendations to support the forest and wood products industry in South and Central Queensland in addressing its workforce skills and training needs. These recommendations aim to:

- Establish a sustainable mechanism for addressing regional workforce and skill shortage and training needs.
- Explore training opportunities.
- Foster collaboration between employers and training organisations.
- Develop a new generation of trainers.
- Increase the use of apprenticeships and traineeships.

I. Prioritising Regional Skills and Training Programs

Recommendation 1: Work with industry experts to prioritise regional skills and training needs associated with each industry sector, placing a particular focus on critical occupations. This should build on the insights and needs identified in this report.

Recommendation 2: Identify available training options to bridge priority skills gaps and shortages. Evaluate these options. Coordinate and facilitate collaboration between employers and training organisations to establish regional training programs.

Recommendation 3: Investigate what financial grants and incentives are available to businesses that invest in staff development and training, such as apprenticeships, internships, and other on-the-job training initiatives. Once this information is obtained, disseminate it to employers.

II. Developing Tailored Training Programs

Recommendation 4: Establish partnerships to create and implement tailored training programs and materials to address priority skills gaps and shortages in the region, where needed. These partnerships should provide collaborations and resources such as funding, mentorship, and other support.

- Pair businesses with educational and training organisations and government grants to develop tailored training programs, such as industry-based micro credentials or modules aligned to national training packages, to enhance the skills and competencies of existing workers in line with regional business/sector priorities.
- Connect employers with national programs and initiatives that focus on developing training resources and programs to address skill shortages, such as the initiative for forester occupations by AFPA and Forestry Australia; or improve workforce skills, particularly in relation to emerging technologies and trends.
- Advocate for the continuous improvement of training resources and programs to ensure training meets the changing demand of the industry.

Recommendation 5: Encourage region/industry-wide mentorship programs to provide an opportunity for experienced professionals, including those who are retired or transitioning to retirement, to share their knowledge and insights with those who are just entering the industry or in need of training.

Recommendation 6: Establish partnerships to develop and maintain a future generation of workplace trainers and assessors. These individuals should be drawn from existing workforce and should be available for training activities on priority skills in the region on an ongoing basis. These partnerships require an effective teaching resource/training organisation to deliver the Certificate IV in Training and Assessment, funding to incentivise the uptake of this training, a full and continued commitment from businesses, and support to transition qualified workplace trainers into teaching roles.

III. Supporting a Regional Pipeline of Skilled Workforce

Recommendation 7: Support activities that provide educational opportunities to local communities, showcasing success stories, and emphasising career development options to change people's perspectives of the industry and draw in new, non-traditional forestry workers. Such activities may include:

- Invite representatives from schools, universities, training organisations, career counselling services, job placement services and communities to visit industry operations and learn about the career paths and skills required in the industry.
- Provide information sessions, workshops, videos and infographics about the industry, its potential, and future growth opportunities to increase awareness of the industry within local communities and attract new workers.
- Showcase success stories of individuals who have found success within the industry. This will support creating a positive perception of the work and demonstrate the potential rewards of working in the industry to potential employees.
- Promote jobs, entry requirements, training and career development opportunities available in the industry to raise awareness of the breadth and depth of our industry in the region. Use different forms of promotional material and through social media to reach out to students, teachers and parents to give them an opportunity to explore the industry in an accessible and passive way.
- Use the assistance of trade unions and other workforce development organisations, such as Group Training Organisations, to find, locate, source and/or train qualified workers for the industry.
- Develop internships programs that provide students with exposure to multiple industry sectors, roles, and locations. This will allow them to gain valuable experience in the industry and make an informed decision about the career path they wish to pursue.

Recommendation 8: Establish and maintain long-term partnerships and activities with local schools to provide teachers, students and parents with a wealth of specialised timber knowledge and insight into many different career pathways. These engagements may involve activities to incorporate forestry aspects and educational materials (e.g., ForestLearning) into the school curriculum (e.g., STEM, Geography); supporting school-based apprenticeships and traineeships in forestry/timber processing for year 10, 11 or 12 students; setting up programs such as industry tours for senior students; and facilitating student-based projects related to the industry and its topics and issues.

IV. Developing Recruitment and Retainment Programs

Recommendation 9: Support regional recruitment and retention strategies to reach a diverse pool of potential candidates and encourage businesses to foster a people-centred culture. Such activities may include:

- Develop and implement a regional recruitment plan in accordance and collaboration with the national approach to ensure that businesses are able to reach a broad and diverse pool of potential candidates and recruit the right people for the right roles. This plan should include job descriptions, job postings, entry requirements, identifying potential recruitment sources, and leveraging social media to advertise job openings.
- Encourage businesses to take a progressive approach to manage a sustainable workforce and create a people-centred culture. This includes providing professional support to businesses to foster a positive work environment and offer educational opportunities to develop the skills of entry-level workers (new hires). These initiatives should focus on teaching the value of work ethic, self-management and teamwork, as well as providing professional development of existing workers and job retraining programs, helping workers to learn new skills or transition into different jobs.

V. Improving Resources and Programs

Recommendation 10: Support businesses/sectors to develop and maintain workforce development and succession plans at a regional level, and use data and analytics on employee skills, job roles, and career paths for future skills and training planning.

Recommendation 11: Support industry-focused professional development resources, including events and online platforms, to enable workers to access the latest materials and resources that build on and expand exiting technical webinars and initiatives of industry organisations such as Timber Queensland, Forest and Wood Products Australia (FWPA), Forestry Australia, Responsible Wood, Frame and Truss Manufacturers Australia (FTMA).

Recommendation 12: Monitor and seek out opportunities that leverage government and industry resources to provide subsidised or free training courses.

Promote these opportunities to maximise their potential. Additional activities may include:

- Advocate for allocating special funding towards the high cost training per learner in thin (small, regional and remote) markets to: a) reduce the financial risks that RTOs face when delivering to our industry; b) ensure that employers can compensate the costs associated with training so that they are motivated to upskill and train their employees as a means to eventually improve productivity, safety and employee retention; and c) assist learners with the travel and accommodation expenses when they need to travel to an appropriate RTO or learning event (e.g. interstate).
- Ensure that industry bodies, businesses and the VET Industry Skills Adviser (Primary Industries) of the Queensland Department of Employment, Small Business and Training collaborate to provide the State Government with advice on skill shortage in our industry. This advice should be used to inform the updating of the Queensland Priority Skills List¹¹ and Queensland Skilled Occupation Lists (QSOL)¹², which set priorities for the allocation of training funding, employer incentives for apprentices and trainees, and skilled visa to fill critical skill shortages across the state.

Recommendation 13: Encourage businesses to take advantage of [the national system for skills verification](#). This online system records training and verifies the currency of worker skills. It allows businesses to keep track of their employees' skills, making sure that they have undertaken the necessary nationally recognised training and have kept their skills up to date through regular practice, both for high-risk and non-high-risk tasks or activities. It ensures that teams remain compliant with legislation and standards.

VI. Regional skills and career service organisation

Recommendation 14: Establish a regional skills and career hub to deliver on Recommendations 1 to 13 to support the five themes: prioritising regional skills and training programs, developing tailored training programs, supporting a regional pipeline of skilled workforce, developing recruitment and retainment programs, and improving resources and programs. The regional skills and career hub should engage with relevant industry organisations and partners to ensure that there is a structural alignment at the regional, state and national levels, with respect to the work and activities being undertaken.

¹¹ <https://desbt.qld.gov.au/training/providers/funded/priority-skills-list>

¹² <https://migration.qld.gov.au/occupation-lists>

ATTACHMENT 1: ANZSIC DIVISIONS AND SUBDIVISION CODES AND TITLES

For the purposes of this report, data from the ABS defines the forest industry using ANZSIC Divisions, Subdivisions and Classes Codes and Titles as follows:

A Agriculture, Forestry and Fishing

03 Forestry and Logging

030 Forestry and Logging

0301 Forestry

This class consists of units mainly engaged in growing standing timber in native or plantation forests, or timber tracts, for commercial benefit. This class also includes the gathering of forest products such as mushrooms, kauri gum or resin from forest environments.

0302 Logging

This class consists of units mainly engaged in logging native or plantation forests, including felling, cutting and/or roughly hewing logs into products such as railway sleepers or posts. This class also includes units mainly engaged in cutting trees and scrubs for firewood.

05 Agriculture, Forestry and Fishing Support Services

051 Forestry Support Services

0510 Forestry Support Services

This class consists of units mainly engaged in providing support services to forestry. Services include silvicultural services, such as planting, pruning and thinning trees, forest reforestation, forest plantation conservation or maintenance. This class also includes units mainly engaged in operating forestry planting stock nurseries.

C Manufacturing

14 Wood Product Manufacturing

141 Sawmilling and Processing

1411 Log Sawmilling

This class consists of units mainly engaged in manufacturing rough sawn timber, and boards.

1412 Wood Chipping

This class consists of units mainly engaged in manufacturing softwood or hardwood wood chips.

1413 Timber Resawing and Dressing

This class consists of units mainly engaged in resawing or dressing timber, timber boards and mouldings. Dressing timber includes seasoning (kiln or air drying) or chemical preservation.

149 Other Wood Product Manufacturing

1491 Prefabricated Wooden Building Manufacturing

This class consists of units mainly engaged in manufacturing wooden prefabricated buildings such as gazebo, sheds, kit set home, other buildings.

1492 Wooden Structural Fitting and Component Manufacturing

This class consists of units mainly engaged in manufacturing wooden structural fittings and components such as roof trusses, doors, wood-framed doors, wall and window frames, shop fronts and joinery (including kitchen fittings) for buildings.

1493 Veneer and Plywood Manufacturing

This class consists of units mainly engaged in manufacturing veneers and plywood

1494 Reconstituted Wood Product Manufacturing

This class consists of units mainly engaged in manufacturing wood boards and sheets from reconstituted wood fibres such as wood chips, sawdust, wood shavings, slab wood or off-cuts. Also included are units that manufacture laminations of timber and non-timber materials (including decorative plastic laminates on boards or other substrates).

1499 Other Wood Product Manufacturing n.e.c.

This class consists of units mainly engaged in manufacturing wood products not elsewhere classified, including wooden containers, pallet, trellis and ornamental products. This class also includes wicker ware, cork, bamboo or cane products (excluding furniture).

ATTACHMENT 2: ENROLMENTS IN FOREST AND WOOD PRODUCTS COURSES DURING 2020 AND 2021

Unit of competency	2020	2021	Total
FWPCOR2205 Follow WHS policies and procedures	332	399	732
FWPCOT2238 Cut materials with a hand-held chainsaw	152	259	410
FWPHAR2206 Operate a mobile chipper/mulcher	126	246	373
FWPCOT2240 Cut material with a pole saw	58	192	251
FWPCOR2203 Follow environmental care procedures	85	41	128
FWPCOR2201 Work effectively in the forest and forest products industry	44	43	86
FWPCOR3201 Implement safety, health and environment policies and procedures	38	39	78
FWPCOR3202 Conduct quality and product care procedures	57	24	77
FWPCOR2202 Communicate and interact effectively in the workplace	29	34	66
FWPCOR3204 Visually assess materials	26	17	47
FWPHAR3227 Operate forwarder	20	26	45
FWPHAR3225 Operate excavator with log grapple	30	14	42
FWPHAR3230 Operate skidder	32	14	40
FWPCOT2249 Visually stress grade hardwood	24	3	36
FWPCOR3203 Evaluate fire potential and prevention	26	6	30
FWPHAR3226 Operate feller buncher	18	8	30
FWPCOT2233 Navigate in forest areas	17	15	27
FWPHAR3228 Operate loader	12	9	24
FWPCOT5209 Manage tree harvesting to minimise environmental impact	12	6	23
FWPCOT3261 Transport forestry logs using trucks	14	5	21
FWPCOT2229 Dock material to length	3	14	20
FWPFGM5208 Manage road construction and maintenance	11	9	20
FWPHAR3229 Operate single grip harvester	12	13	20
FWPFGM2207 Undertake brushcutting operations	7	10	19
FWPTMM2201 Cut material to length and angles	0	15	15
FWPCOT5201 Implement sustainable forestry practices	6	8	13
FWPCOT3214 Take off material quantities	2	10	13
FWPCOT3216 Assess and maintain saw performance	11	0	11
FWPCOR2204 Follow fire prevention procedures	7	8	11
FWPCOT2235 Assess timber for manufacturing potential	0	10	10
FWPCOT3242 Lay up timber roof trusses	0	10	10
FWPCOT3218 Quote and interpret from manufactured timber product plans	0	6	10
FWPCOT5208 Build and maintain community relationships	6	11	9
FWPCOT3239 Create drawings using computer aided design systems	3	2	9

Unit of competency	2020	2021	Total
FWPCOT2241 Apply wood and timber product knowledge	8	3	8
FWPCOT3284 Grade, sort and mark timber materials	8	0	8
FWPTMM2203 Read and interpret timber truss, floor and/or frame fabrication plans	0	8	8
FWPCOT3204 Prepare and interpret sketches and drawings	6	10	7
FWPSAW3242 Treat timber	0	7	7
FWPHAR3210 Conduct mechanical processor operations	6	0	6
FWPTMM3204 Interpret designs to prepare timber roof truss drawings and documents using computers	0	2	6
FWPCOR4203 Monitor quality and product care procedures	2	2	6
FWPCOT2246 Appearance grade hardwood sawn and milled products	4	4	5
FWPCOT2261 Process orders and prepare for despatch	0	5	5
FWPCOT3220 Quote and interpret from computerised timber manufactured product plans	0	5	5
FWPCOT3212 Replace saws, blades and guides	5	0	5
FWPCOT3272 Set up and run multi-head moulder/planer to produce simple profiles	0	5	5
FWPCOT3241 Assemble timber wall frames	0	4	4
FWPSAW3205 Dry hardwood	5	1	4
FWPSAW3206 Dry softwood	6	0	4
FWPTMM3206 Interpret designs to prepare timber wall frame drawings and documents using computers	0	4	4
FWPCOT3232 Operate heat plant	4	0	4
FWPSAW3218 Replace tungsten tips	0	0	4
FWPCOT2228 Store materials	0	0	4
FWPSAW3203 Break down logs	3	0	3
FWPFGM3210 Patrol forest	0	3	3
FWPCOT2227 Process orders and despatch products	3	1	3
FWPSAW3212 Sharpen tipped circular saws	0	0	3
FWPCOT2243 Tail out timber product and waste material	0	3	3
FWPCOT3258 Comply with soil and water protection	2	0	2
FWPTMM4202 Diagnose and calculate production costs	0	3	2
FWPTMM3205 Interpret designs to prepare timber floor system drawings and documents using computers	3	3	2
FWPCOT3202 Navigate in remote or trackless areas	0	1	2
FWPCOT3243 Operate a truss press	0	2	2
FWPSAW4204 Plan and monitor board conversion	2	0	2
FWPSAW3202 Produce sawn green boards	2	0	2
FWPCOT2208 Resaw boards and timber	2	0	2
FWPCOT3302 Access and provide timber and wood product information	0	1	1

Unit of competency	2020	2021	Total
FWPHAR3218 Conduct loader operations	1	0	1
FWPCOT4202 Design timber structures	2	1	1
FWPCOT3201 Hand sharpen knives and blades	2	2	1
FWPCOR4201 Monitor safety, health and environment policies and procedures	1	0	1
FWPCOT3230 Operate automated stacking equipment	1	0	1
FWPHAR3224 Operate crawler tractor	1	0	1
FWPSAW3230 Perform primary log breakdown	0	1	1
FWPCOT3280 Replace saw blades, knives and guides	0	1	1
Total	1,299	1,608	2,905

Source: National Centre for Vocational Education Research (NCVER), VOCSTATS, extracted on 12/12/2022

Establishing a Regional Skills and Career Hub for the Forest and Timber Industry in South and Central Queensland

Business Case Analysis

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1 INTRODUCTION

This report provides an analysis of the factors associated with establishing a regional skills and career support organisation for the forest and timber industry in South and Central Queensland. The proposed organisation is intended to provide the industry with the necessary resources to meet its current and future demands for labour, skills, and training in the region. The analysis includes an evaluation of the potential benefits, costs and risks associated with the proposed organisation, as well as mitigation strategies to support successful implementation. The report also provides the Regional Forestry Hub and Timber Queensland with a well-researched plan to present to the industry and state government, outlining the potential investment, need for funding, and resource management of the organisation.

The proposed regional skills and career support organisation will address current and future industry demands for labour, skills and training in the region by developing and delivering tailored training programs that support a regional pipeline of skilled workers. It will also improve associated resources and programs to eliminate barriers to achieving the current and ongoing skills and training priorities. With the proposed organisation, it is anticipated that the industry will benefit from a suitable, skilled and competitive workforce in the future, which is essential for its long-term success and sustainability in the region.

2 OVERVIEW OF THE INDUSTRY

2.1 QUEENSLAND'S FOREST AND WOOD PRODUCTS INDUSTRY

The forest and timber industry contributes around \$4 billion annually to the Queensland economy and directly employs over 7,800 people¹. Comprising more than 2,000 businesses across three industry sectors, this industry plays a critical role in rural and regional economic and social development. It provides jobs that bring together a diverse workforce and highly specialised skills to grow sustainable forests and convert logs into a range of timber products. In addition, downstream timber processing activities generate a range of engineered wood products and structural components, which are used to construct the majority of state and Australian homes and many other buildings, thus making the industry an integral part to the Queensland economy and its people.

Forestry and support services	Forestry and forestry support sectors grow and manage native forests and plantations for commercial timber production. There are around 390 forest growers and 166 forestry support service businesses in Queensland. The majority of these are small, non-employing businesses. Important forest growers and/or management organisations in the state include HQPlantations and Forest Products. Farm forest growers and other private growers are also active in the state.
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Harvesting and haulage	The forest harvesting sector consists of businesses that fell, process, and transport logs for products like timber, plywood, and pulpwood. These businesses also conduct thinning and collecting of forest biomass. There are 330 forest harvesting contractors in Queensland, 90 % of which are non-employing businesses or have no more than 4 employees.
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¹ It also includes employment in the pulp and paper manufacturing sector.

Wood products manufacturing	<p>Businesses in the wood products manufacturing sector process logs and timber into products for the building and construction industry as well as other markets. Sawmills convert logs into poles, rough-sawn timber, dressed and re-sawn timber. Queensland has around 170 timber sawmills, including large and small softwood and hardwood processors, and portable mills. These businesses are mostly based in regional communities.</p> <p>There are around 10 small wood chipping mills in Queensland, which convert logs or sawmill residues into wood chips for use in paper and wood panel production.</p> <p>Timber re-sawing and dressing mills use sawn timber from other mills to produce finished products such as floorboards, weatherboards and mouldings. These products may require seasoning, chemical preservation, or both. Queensland has about 40 of these mills, including a few large and many small processors.</p> <p>There are many Queensland businesses that manufacture plywood, panel boards, laminated timber products, structural timber frames, roof trusses, wooden containers, pallets, packing cases and other wooden products. The two main panel boards manufacturing sites are based in Gympie and one plywood manufacturer is based in Brisbane. There are also over 700 businesses that manufacture structural timber frames, roof trusses and other wooden structural fittings, and some others that produces wooden containers, pallets, packing cases and other wooden products.</p>
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Source: ABS, 2021, Counts of Australian Businesses June 2018 to June 2022, Cat. No. 8165.0

2.2 SOUTH AND CENTRAL QUEENSLAND’S FOREST AND WOOD PRODUCTS INDUSTRY

Employment

At the regional level, South and Central Queensland’s forest and wood products industry (Forestry Hub’s area) employs 3,600 people, which accounts for nearly half of the entire state’s workforce in this industry. The largest employing region is Moreton Bay with 692 (19%) employees, followed by Gympie with 634 (18%), Fraser Coast with 608 (17%) and Sunshine Coast with 561 (16%).

Around 2,461 (68%) of the estimated workforce is employed in forestry and primary processing, while 1,115 (12%) are engaged in manufacturing of wooden structural fittings and components and other wood products.

Workforce diversity

Age distribution About 43% of workers in the forest and wood products sectors in South and Central Queensland are under the age of 40, 46% are between the ages of 40 and 60, and 11% are over the age of 60. The forestry, logging, and reconstituted wood product industries employ more people in the older age groups.

Gender Women make up 15% of the forest and wood products industry workforce in South and Central Queensland, with higher proportions in the forestry and forestry support services sectors (19% and 28%, respectively). However, only

	6% of the workforce in the manufacturing of reconstituted wood product is female, which is significantly lower than the national average (18%).
Aboriginal and Torres Strait Islander participation	Aboriginal people make up 3% of the workforce in the forest and wood products sectors in South and Central Queensland, with the largest number of workers in timber processing (51 people) and the largest proportion in forestry support services (8%).
Job roles	
	Workers in the forest and wood products industry in the South and Central Queensland are primarily employed as labourers, machinery operators and drivers (25%), technicians and trade workers (24%), and managers (11%).
Forestry and support services	Professional foresters, forestry workers and mobile plant operators make up roughly half of the forestry and support services workforce
Harvesting and haulage	Truck drivers, log plant operators and tree fellers are the main source of employment (50%) in the harvesting sector
Wood products manufacturing	The primary occupations in wood products manufacturing are machinery operators and forklift and loader drivers (30%), as well as sawmill and timber yard workers (25%). Cabinetmakers and carpenters are key roles in the production of wood joinery and timber structural components.

Source: ABS Census of Population and Housing, 2021, TableBuilder

3 LABOUR AND SKILLS NEEDS

The forest and timber industry in South and Central Queensland is experiencing rapid growth in demand for forestry, harvesting, and haulage services, with rising production targets and the expansion of sawmills, timber frame and truss manufacturers, and pellet mills. This is driving an increasing need for a larger and more diverse labour force, including experienced professionals and entry-level employees. To better understand the current and future skills and training needs of the industry, the Regional Forestry Hub conducted a study in 2022-2023². The findings of this study are summarised below, outlining the existing and emerging labour demands and skills and training needs of the forest and timber industry in South and Central Queensland.

Labour shortage and future demand

There is an alarming labour shortage, particularly for critical jobs such as foresters, harvester operators, saw technicians, wood machinists, mechanical fitters, truck drivers and estimators and detailers (frame and truss). With market and legislative forces, competition for skilled workforce, individual businesses expanding or aiming for improvement, and retirements estimated to account for a 5% gap in the workforce, the situation is only predicted to worsen over the next five years.

As the industry continues to grow, businesses are faced with the challenge of hiring and training new employees to meet the demands of the market. Analysis reveals that businesses anticipate needing to hire more people in a variety of job categories over the next five years.

² ForestWorks, 2023, Current and Future Skills and Training Needs of the Forest and Timber Industry in South and Central Queensland. A report produced for the South and Central Queensland Regional Forestry Hub.

Forestry and support services	New plantations are being planned, which will require more nursery workers, tree planters, silviculture employees and foresters. However, it is believed that with process improvements and the application of technology, these roles could be filled with fewer people, allowing for the reallocation of current workers to other roles.
Harvesting and haulage	Harvesting and haulage businesses will need to hire additional harvesting operators and truck drivers (one large business reported 10 harvesting operators and 20-30 truck drivers) in the next 3-5 years, as well as heavy machine operators for site preparation. There is also a growing demand for heavy machine operators and harvesting equipment operators, like harvesters, skidders, loaders, excavators and woodchippers, due to increased interest in biomass for energy from harvesting and vegetation regrowth management.
Wood products manufacturing	<p>Sawn timber manufacturing - Sawmills may require more process operators if future log contracts and production targets increase, but this will depend on streamlining processes and using technology to lower labour costs. New job roles involving manufacturing and lean-driven processes are expected to be created, while existing manual timber graders are likely to be transferred to other positions. A new glulam facility is expected to become operational in the region by the end of 2023, requiring around 25 technical staff members once construction is complete.</p> <p>Frame and truss manufacturing – A key manufacturer and provider of metal connectors, software, machinery and engineering services to timber fabricators is planning to expand their capacity by 50%. This will require the hiring of additional staff, including three estimators and detailers and additional machinery production workers, in the coming years.</p> <p>Pellet manufacturing - A new pellet mill will be built in the region, requiring 4 operators with two specialised positions - quality control technicians and hybrid technical-mechanical specialists - to fill the roles. The required skills can be taught both on- and off-site in conjunction with an existing pellet manufacturing plant.</p>

Skills and training needs

Businesses are also recognising the importance of employee development and are investing in in-house resources and external training providers to help their employees gain the necessary skills for trade occupations, mobile plant operations, and other areas requiring a work permit. To further develop their workforce, some businesses are exploring the possibility of apprenticeships and mentorships. Additionally, businesses are taking steps to recognise and reward existing employees by providing them with formal training and qualifications.

As businesses look to the future, they are focusing their efforts on a variety of skill areas that are essential for businesses to remain competitive and to meet the demands of the ever-changing business environment. These skills include, but are not limited to business management, leadership, digital technology and data analysis, basic knowledge of trees, forest management and wood as well as equipment and process operation skills.

Sector	Skills / training needed	Targeted job roles
Forestry and support services	Business management	Management positions
	Forester degree	Entry-level foresters
	GIS	
	Skill sets in technology use and digital data management and application	Forestry technicians
	Skill sets in using aerial spraying and drones	Forestry technicians
	Chainsaw operations*	
	Chemical handling*	Forest workers
	Production burning (as part of vegetation regrowth management)*	
	Report writing (using digital technology)	
Harvesting and haulage	Basic knowledge of trees and forest management	Harvesting operators
	Report writing (using digital technology)	
	Business management (with a focus on communication, critical thinking and problem solving)	Managers / Senior operators
	Operate harvesting machine with winch-assist system	
Wood products manufacturing (processing)	Operate harvesting machines (including mechanical felling, log extraction and loading)*	Harvesting operators
	Transport logs using trucks*	Truck drivers
	Leadership	Site manager
	Operational risk	Operational risk manager
	Lean manufacturing	Front-line managers;
	Leadership and people skills	Team leaders
	Programming and electronics	Technicians
	Data analysis	Quality control technicians
	Wood science	
	Quality control	
Wood products manufacturing (processing)	Drying techniques (operations)	
	Digital technology use	
	Visual grading - hardwood	
	Timber treatment techniques (operations)	Process operators
	Bench Operation/Sawyer/Line Bar & Sizing Carriage Operation	
	Finger jointing	
	Chainsaw	
	Certificate III in Timber processing*	
	Fire safety*	
	Mental health and wellbeing	
	Front-end loader*	Log yard operators
Forklift*	Forklift drivers	

4 CHALLENGES IN WORKFORCE TRAINING AND RECRUITMENT

The forest and timber industry in South and Central Queensland faces many challenges in terms of workforce training and recruitment. These can range from competition from other industries and gaps in regional infrastructure impacting regional liveability and the workforce, to public perception of the industry, job and salary levels and the absence of school-based forestry traineeships and/or related topics in school curricula. Moreover, there is a lack of succession planning, a disconnect between applicant expectations and the reality of forestry jobs, pressure to increase wages, and the need for mentoring and training/skills development programs. Training providers also struggle with delivering training to a dispersed and low ratio of learners, the diversity of technical jobs and skills required in the industry, and funding the development of teaching materials that precedes delivery. All these challenges were identified in the Regional Forestry Hub's 2022-2023 study³, with further details provided below.

Challenges in implementing formal workforce training:	<p>Additionally, there is a need to address the lack of training options available to the industry in the region and to develop training capacity and capabilities more broadly. While businesses are looking for industry-specific training that covers more than just trade-specific skills to increase the general knowledge of downstream and upstream processes in our industry, there is a lack of forest and timber industry trainers and training organisations in Queensland.</p>
a) Lack of training options	<p>Businesses will benefit from any support that enables them to access and choose training providers that best meet their needs and create partnerships with new training providers.</p> <p>Accessing support services, such as information about accessible training programs and government subsidies, as well as guidelines and assistance for executing workforce development plans, can also improve the industry's capacity to make workforce development decisions, according to businesses.</p>
b) Lack of post-secondary programs	<p>The main training issue in the forest sector is the lack of post-secondary programs and options for training new foresters. The forest sector needs support to access or import qualified foresters, and the government should create policies to make this easier to temporarily import qualified foresters until the local education system has the necessary resources to train domestic foresters. This shortage of foresters may also be a factor in the public's negative perception of forestry operations, as only forestry graduates can effectively communicate the sustainability of the sector.</p>
c) Lack of RTOs	<p>A lack of RTOs that can provide and assess required skill sets for harvesting operators and truck drivers has been raised by businesses in harvesting and haulage. To overcome the challenge of the shortage of skilled workers, some businesses are offering training to operators of skidders, excavators, and loaders so they can become skilled in harvesting. Furthermore, businesses are enrolling their employees in Training and Assessment (TAE) courses. Sharing workplace trainers and using training providers for induction training such as</p>

³ ForestWorks, 2023, Current and Future Skills and Training Needs of the Forest and Timber Industry in South and Central Queensland. A report produced for the South and Central Queensland Regional Forestry Hub.

	contract obligations, fire awareness and industry safety is also seen as useful in getting new workers job ready.
Challenges in finding and recruiting suitable employees	<p>Finding workers with a good work ethic and willingness to work in the timber industry is a challenge. Wages are generally competitive in the industry but vulnerable to wage spikes in booming sectors, making it difficult to retain employees with transferable skills. There is a negative perception of the industry by the public. Competition for skilled workers from other manufacturing businesses and the mining industry is intense, and there is a lack of understanding of modern sawmilling and related fields.</p> <p>Businesses cite a variety of challenges when it comes to finding and hiring employees, including competition from other industries, public infrastructure in the regions, public awareness and perception of the industry and its jobs and wages, and the lack of school-based forestry traineeships or related topics in school curricula.</p>
Suggestions for attracting motivated individuals	Industry participants suggested that to attract motivated individuals to work in forest and wood products operations, we should focus on the fascinating aspects of our automation and equipment, communicate clearly about the industry and skills needed, and demonstrate our workplaces. We should also replicate successful models and determine the optimal learning approach for each employee.
Challenges in retaining skilled workers	Businesses struggle to retain skilled workers due to the lack of succession and workforce development planning, a disconnect between expectations and reality, and pressure to increase wages.
Challenges faced by training providers	RTOs face a number of challenges in delivering nationally accredited training to our industry, such as learners dispersed over a large geographical area, a low student-to-trainer ratio, and a diverse range of jobs and skills that require expensive machinery and subject matter expert trainers. These challenges make it difficult for RTOs to travel long distances to train and assess small cohorts of learners on the job, and to fund the development that precedes their delivery.
Enhancing effectiveness of training delivery	To ensure the effectiveness of the training, there needs to be greater interaction and coordination between industry and RTOs, with the RTOs providing knowledge-based training in a classroom or online environment and workplace trainers and assessors or external trainers and assessors engaged by the RTO providing practical training and assessment on the job.

The need for a new generation of trainers

Bridging the gap between industry and training providers	Businesses tend to be sceptical of a trainer's knowledge due to their lack of experience and disconnection from technological advancements and new work processes. As a result, training providers believe that a new generation of trainers - workplace trainers and assessors - is needed to capitalise on
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	already skilled practitioners from the industry and assist vocational education and training in the industry.
Working with training organisations to provide TAE Qualifications	Businesses and their workers can be supported to make the transition to teaching with the help of training organisations. These organisations can form partnerships with suitable RTOs to provide training and assessment (TAE) as a trade-based qualification (rather than corporate-based training) and assist new workplace teachers to take on training responsibilities and meet compliance requirements.
Employer's role in supporting the transition to teaching	Employers must also be willing to release employees transitioning to teaching from their regular duties and change their job requirements so that they can participate in training activities.

5 NEED FOR A REGIONAL SKILLS AND CAREER SUPPORT ORGANISATION

The establishment of a regional skills and career support organisation is critical to meeting the current and future demands of the forest and timber industry in South and Central Queensland. This is evidenced in the Regional Forestry Hub's 2022-2023 study⁴ on current and future skills and training needs, as highlighted by its Recommendation 13 (see Attachment 1).

The purpose of this organisation would be to act as a centralised hub for the region, providing coordination and implementation of the first 12 recommendations from the Regional Forestry Hub's 2022-2023 study. This study has identified the importance of such an organisation in order to:

- meet the current and future labour demands in the face of labour shortage and address the various skills and training needs, and
- provide increased support for challenges in workforce training and recruitment.

The proposed organisation will provide a comprehensive and holistic approach to addressing the challenges associated with attracting, recruiting and training workers in the region. It will be responsible for developing and delivering tailored training programs, supporting a regional pipeline of skilled workforce, developing recruitment and retention programs, and improving associated resources and programs. Additionally, it will act as a platform to foster long-term collaboration between industry, government, and educational institutions. This will ensure that the regional setting and network are well-positioned to meet current and future industry demands and priorities for labour, skills and training.

Without this regional skills and career support organisation, the forest and wood products industry in South and Central Queensland will not be able to meet its future labour demand in the face of labour shortage and various skills and training needs.

⁴ ForestWorks, 2023, Current and Future Skills and Training Needs of the Forest and Timber Industry in South and Central Queensland. A report produced for the South and Central Queensland Regional Forestry Hub.

6 OBJECTIVES OF THE ORGANISATION

Four objectives and twenty-five activities are suggested for the proposed regional skills and career support organisation for the forest and timber industry in South and Central Queensland. These objectives and activities are based on the findings of the Regional Forestry Hub's 2022-2023 study and designed to ensure the industry is prepared to meet its present and future demands for labour, skills, and training. Details of the objectives and activities are provided below.

Objective 1: Develop Training Solutions – Develop and deliver tailored training programs to meet the current and future industry demands for labour, skills and training in the region.

Activities:

Encouraging and Promoting Training

1. Work closely with industry professionals to prioritise regional skills and training needs
2. Explore training opportunities to bridge priority skills gaps and shortages
3. Foster coordination and collaboration between employers and training organisations to establish targeted regional training programs
4. Investigate and disseminate information about training subsidies and incentives for businesses investing in staff development and training
5. Promote apprenticeships, internships, and other on-the-job training initiatives

Establishing Partnerships and Resources

6. Establish partnerships with businesses, educational and training organisations, and support applications to government grants to develop tailored training programs
7. Coordinate resources such as funding, mentorship and support to contribute to the development of the training

Developing Tailored Training Programs

8. Develop tailored training programs to enhance existing workers' skills and competencies in line with regional businesses' needs, with the help of educational and training organisations and government grants.

Connecting Employers with Programs

9. Connect employers with national programs and initiatives that focus on developing training resources and programs to address skill shortages, improve skills, and keep up with emerging technologies and trends.

Advocating for Improvement

10. Advocate for the continuous improvement of training resources and programs to keep up with industry developments.

Establishing Mentorship Programs

11. Create regional and industry-wide mentorship programs, where experienced professionals can share their knowledge and insights with trainees and new entrants to the industry.

Developing Future Workplace Trainers and Assessors

12. Develop and maintain a future generation of workplace trainers and assessors through partnership programs, with an effective teaching resource/training organisation delivering the Certificate IV in Training and Assessment, funding to incentivise its uptake, full commitment from businesses, and support to transition workers into teaching.

Objective 2: Strengthen Workforce Attraction and Recruitment – Support a regional pipeline of skilled workforce by providing recruitment and retention programs to attract, recruit and train workers in the region.

Activities:

Reaching out

1. Invite schools, universities, training organisations, career counselling, job placement services and communities to visit business operations and provide information sessions and workshops on the industry.

Showcasing success stories

2. Promote a positive perception of the work and show potential employees the tangible benefits.

Utilising industry partners

3. Use the assistance of trade unions and other workforce development organisations to develop/locate/source qualified workers.

Promoting training

4. Show job seekers potential for growth and advancement in the industry.

Developing programs

5. Offer internships in multiple industry sectors, roles, and locations to expose students to different fields.

Developing regional recruitment plan

6. Create job descriptions, post job openings, use recruitment sources and social media to advertise job openings to ensure businesses reach a diverse pool of potential candidates.

Encouraging progressive workforce management

7. Offer professional support to foster a positive work environment, provide educational opportunities, develop skills of entry-level workers, and facilitate existing workers' support for learning different skills and/or transitioning into new jobs.

Objective 3: Support Additional Resources and Programs – Improve associated resources and programs to eliminate barriers to achieving the current and ongoing skills and training priorities.

Activities:

Developing Workforce Plans

1. Support businesses/sectors to develop and maintain workforce development and succession plans regionally and use data/analytics for future skills/training planning.

Professional Development Support

2. Support industry-focused professional development centres/events/online platforms for workers to access materials/resources.

Special Funding for Training

3. Advocate for special funding for high-cost training in thin markets to reduce RTO financial risks, motivate employers to upskill, and assist learners with travel/accommodation expenses.

Advising on Skill Shortages

4. Collaborate with industry bodies/businesses/VET Industry Skills Advisers to advise State Government on skill shortages for Queensland Skilled Occupation List (QSOL).

Managing Employee Skills

5. Encourage businesses to use the industry's skills verification system to manage skills of employees, ensuring they have undertaken necessary nationally recognised training and kept skills current.

Objective 4: Evaluate and Monitor Programs – Monitor and evaluate the effectiveness of the organisation's programs and initiatives.

Activities:

1. Establish formal key performance indicators and performance monitoring framework for the proposed organisation.

7 BENEFITS OF THE ORGANISATION

7.1 FOR THE INDUSTRY

Establishing a regional skills and career support organisation will provide an array of advantages to the industry. Not only would it enable the industry to remain competitive by creating customised training programs and fostering a regional pool of skilled personnel, but it will also foster collaboration between industry, government, and educational institutions. This will guarantee that the region is optimally equipped to cater to the current and future industry requirements for labour, skills, and training, while also providing a holistic and long-term plan to mitigate the barriers to accomplishing the current and ongoing skills and training objectives. Additionally, the organisation will devise recruitment and retention programs and enhance related resources and programs to help the industry meet its goals. These benefits are further detailed below.

1. Effective Training Solutions - Improved access to tailored training programs and resources to meet the industry's current and future labour demands and provide quality training and assessment to its workforce.

The proposed organisation will facilitate collaboration and knowledge sharing between employers and training organisations, providing a platform to access and develop tailored training programs and resources. This will enable the industry to meet its current and future labour and skills demands more effectively, while remaining competitive in the region.

The benefits of these initiatives to the industry will be extensive and include the following:

- Improved regional skills and training to meet the current and future industry demands
- Improved coordination and collaboration between employers and training organisations
- Increased access to training grants and incentives for businesses
- Increased access to apprenticeships, internships, and other on-the-job training initiatives
- Established partnerships between businesses, educational and training organisations, and government grants to develop and offer tailored training programs
- Enhanced skills of existing workers that meet the needs of regional businesses
- Improved access to national programs and initiatives that focus on developing training resources and programs
- Increased advocacy for the continuous improvement of training resources and programs
- Established regional and industry-wide mentorship programs
- A future generation of workplace trainers and assessors developed through partnership programs.

2. Effective Workforce Attraction and Recruitment Solutions - Increased support for challenges in workforce attraction and recruitment.

The proposed organisation will implement strategic initiatives to support a regional pipeline of skilled workers, including developing recruitment and retention plans, and providing associated resources and programs. This will enable the industry to remain competitive in the region by ensuring efficient and effective attraction, recruitment, and training of workers.

The benefits of these initiatives to the industry will be extensive and include the following:

- Increased access to a larger, more diverse pool of potential employees
 - Improved perception of the industry from communities and potential employees, leading to increased recruitment and retention rates
 - Improved access to professional and educational support for existing workers, leading to increased job satisfaction and career opportunities
 - Increased engagement with multiple industry sectors and locations, leading to a better understanding of the industry's jobs and requirements
 - Increased opportunities for growth and advancement for entry-level workers
 - Improved recruitment and retention strategies, leading to cost savings for businesses.
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3. Enhanced Workforce Planning and Development - Improved workforce planning and development support, advice on skill shortage, and improved employee skills management.

The proposed organisation will provide support to the industry in developing and maintaining workforce plans that leverage data and analytics, as well as industry-focused professional development events. It will also seek funding for ‘high-cost training in thin markets’ to support RTOs reduce financial risks, motivate employers to upskill, and assist learners with travel and accommodation expenses. The organisation will also collaborate with industry bodies and businesses to advise the state government on skill shortages, as identified by the Queensland Skills Occupation list (QSOL) and encourage the use of the industry’s skills verification system to manage employee skill levels and currency.

The benefits of these initiatives to the industry will be extensive and include the following:

- Improved workforce planning and development
- Professional development support
- Improved access to training
- Improved advice on skill shortages
- Improved employee skills management.

7.2 FOR LOCAL COMMUNITY

A regional skills and career support organisation will also have a positive impact on the community and individuals. Its objectives of developing tailored training programs, strengthening workforce attraction and recruitment, and providing support resources and programs, can have far-reaching benefits, such as boosting economic stability, enhancing career prospects, supporting lifelong learning, and strengthening communities. These benefits are detailed below, and they can help to create a more vibrant, prosperous and secure region for everyone.

1. Boosting Economic Stability	<ul style="list-style-type: none"> • Increase access to employment opportunities for local people in the region, helping to reduce unemployment and create a more stable and prosperous economy. • Connect local businesses with qualified and trained employees, helping to boost productivity and profitability.
2. Enhancing Career Prospects	<ul style="list-style-type: none"> • Provide an avenue for the exchange of skills and knowledge between the community and businesses, resulting in innovation and job creation. • Enhance job security and career prospects for individuals, leading to an overall improvement in quality of life.
3. Supporting Lifelong Learning	<ul style="list-style-type: none"> • Create a culture of lifelong learning, providing a pathway for people to upgrade and develop their skills.
4. Strengthening Communities	<ul style="list-style-type: none"> • Support the development of strong, vibrant communities, as people have an increased sense of purpose and belonging.

8 STRUCTURE OF THE ORGANISATION

The proposed regional skills and career support organisation for the forest and timber industry in South and Central Queensland should have an organisational structure that is designed to maximise efficiency and collaboration. This structure should be flat, with a strong focus on collaboration and cross-functional teams. This will enable the team members to work closely together to achieve the organisation's objectives. Details of the proposed functions, roles and staffing requirements are provided below.

Executive Board	The Executive Board will be responsible for providing overall governance and oversight of the organisation's operations, setting strategic direction, providing policy guidance and monitoring progress and results to achieve its objectives, such as the development and delivery of tailored training programs to meet current and future labour and skills demands in the region, and recruitment and retention programs to attract and train workers. The Board would also be tasked with making decisions regarding the outsourcing of services, such as the selection of providers, the terms of service and the monitoring and oversight of these services, in order to ensure the highest quality services while staying within budget constraints.
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Operations	Executive Manager – The Executive Manager will be responsible for setting the overall strategic direction of the organisation and managing all aspects of the organisation, including operations, contracts, budgets, and finances. This individual will oversee the development and implementation of comprehensive communications and marketing campaigns to raise awareness of the organisation and its objectives among stakeholders, partners and the public. Additionally, this individual will be tasked with engaging professionals to evaluate and monitor programs, ensuring the efficient use of funds (Objective 4).
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Training & Resource Development Manager – The Training & Resource Development Manager will play a critical role in meeting Objective 1 and 3 by designing and implementing tailored training programs while developing and coordinating regional training partnerships to meet the current and future industry demands and priorities for labour and skills in the region. This individual will also research industry and provide resources and programs that address any identified barriers to achieving labour, skills and training priorities. In addition, this individual will maintain relationships with external stakeholders, including industry partners, government and community organisations, and outsource services to the organisation for programs where specialised expertise is required. This position will be a full-time role and will report to the Executive Manager.

Recruitment & Retention Manager – The Recruitment & Retention Manager will play a critical role in meeting Objective 2 by planning, creating and implementing recruitment and retention programs to attract and train workers in the region. This individual will maintain relationships with external stakeholders, such as regional schools, universities, training organisations, career counselling, job placement services, and communities relevant to the industry in the region. Moreover, this individual will outsource services for programs where specialised expertise is

required. This position will be a full-time role and will report to the Executive Manager.

Business Administration & Communications Manager – The Business Administration & Communications Manager will be responsible for providing administrative and communication support to the operations team, such as budgeting, accounting, payroll and other office management duties. In addition, this individual will be tasked with promoting and advertising training and recruitment programs to ensure stakeholders are well informed and up to date on the organisation’s programs. This position will be a full-time role and will report directly to the Executive Manager.

Advisory Board	The Advisory Board , comprised of Board members, industry representatives, community partners, relevant stakeholders, and professionals, will provide advice, guidance, and support to the organisation. The Advisory Board will work collaboratively with the organisation to devise and execute strategies to reach objectives. In addition, they will provide direction to develop and deliver tailored training programs to meet the needs of the local industry. The Advisory Board will also provide feedback on services, such as those that involve outsourcing, and act as a sounding board for the organisation’s ideas and plans. Finally, the Advisory Board will provide guidance on how to use resources effectively and how to create and implement fresh and innovative methods to provide services.
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9 BUDGETARY REQUIREMENTS

The proposed regional skills and career support organisation for the forest and timber industry in South and Central Queensland will require a budget based on the size and scope of the organisation. This includes four full-time management positions and four comprehensive objectives to be achieved. The geographic area the organisation services will also be taken into consideration. An estimate of the budgetary requirements is provided below.

Estimated Start-up Costs	Office Equipment & Supplies (e.g., computers, phones, printers, furniture, stationery, software)	\$25,000
	Recruitment (e.g., 4 full-time management positions)	\$50,000
	Website Design & Hosting / Online Presence	\$5,000
	Total Start-up Costs	\$80,000
Estimated Operating Costs	Office Space Rental (e.g., 1-4 desks)	\$20,000/year
	Insurances (e.g., professional indemnity and public liability covers)	\$2,500/year
	Personnel Cost (e.g., salaries for 4 full-time management positions, incl. on-costs)	\$600,000/year
	Travel and Accommodation (e.g., workshops, conferences, stakeholders)	\$5,000/year
	Staff Training Costs (e.g., seminars, courses)	\$5,000/year
	Professional Services (e.g., legal, accounting, consultants)	\$20,000/year
	Contingency Expenses	\$20,000/year
	Total Operating Costs	\$672,500/year
Estimated Total*		\$752,500

*Estimated total budget requirements for the first year of operation.

10 FUNDING SOURCES

This section identifies five potential funding sources for the proposed regional skills and career support organisation for the forest and timber industry in South and Central Queensland. These include government funding, local industry partnerships and/or corporate sponsorships, industry associations, membership fees, and government tax benefits.

1. Government funding	State and/or Federal Governments may provide funding for the establishment and running of the regional skills and career support organisation. Relevant departments generally provide grants to support projects, programs, one-off seed funding and other initiatives that help to increase the development of skills and career support in regional areas.
2. Local industry partnerships and/or corporate sponsorships	Local forest and timber companies may contribute funding and or become sponsors of the regional skills and career support organisation, providing financial or in-kind support, and other resources such as office space.

3. Industry associations	Industry associations may be willing to provide grants and/or other forms of funding to help support the running of the regional skills and career support organisation.
4. Membership fees	Charging a membership fee for businesses that wish to have access to the organisation's services could be used to fund the organisation's core activities.
5. Government tax benefits	The Australian government provides tax deductions and exemptions for organisations that are established for charitable purposes. These benefits could be utilised to fund the regional skills and career support organisation.

11 RISK ANALYSIS

This section outlines five key risks that could impede the successful launch and operation of the proposed regional skills and career support organisation for the forest and timber industry in South and Central Queensland. These include poorly received or supported by stakeholders, insufficient funds to start and run the organisation, securing resources for long-term sustainability, inadequate staff and resources, and unforeseen challenges. These risks have been assessed as having a medium to high likelihood and impact, and mitigation strategies have been identified to address them. It is essential that these risks are managed effectively to ensure the success of the organisation and enable it to achieve its objectives.

Risk	Likelihood	Impact	Mitigation
1. Poorly Received or Supported by Stakeholders	Medium	High	<ul style="list-style-type: none"> Develop and implement a communication strategy to ensure stakeholders understand the benefits of the organisation. Extensive consultation with stakeholders to discuss clear and measurable objectives for the organisation. Engage stakeholders in the development of the organisation.
2. Insufficient funds to start and run the organisation	High	High	<ul style="list-style-type: none"> Establish a funding strategy that includes a mix of grants. Use existing infrastructure and partner with other organisations to share resources.
3. Securing resources for long-term sustainability	Medium	High	<ul style="list-style-type: none"> Establish effective systems for monitoring progress and evaluating outcomes. Develop and implement a clear communication strategy to ensure stakeholders are kept informed of the organisation's progress and objectives. Evaluate the funding strategy

4. Inadequate staff and resources	Medium	High	<ul style="list-style-type: none"> • Develop a recruitment plan to ensure adequate staff and resources to meet the demands of the organisation. • Develop a training and development plan to ensure staff are adequately trained and equipped to deliver services. • Identify and secure appropriate partners and develop collaborative working arrangements with these organisations.
5. Unforeseen challenges	Medium	High	<ul style="list-style-type: none"> • Develop and maintain a risk management strategy to identify potential challenges and develop strategies to mitigate them. • Establish a network of stakeholders and experts to provide advice on potential challenges and support the organisation in responding to them.

12 CONCLUSIONS

Establishing a regional skills and career support organisation is necessary for the forest and wood products industry in South and Central Queensland to address the current and future labour demands, skills and training needs, and challenges associated with workforce training and recruitment. This organisation would provide comprehensive and tailored training programs, support a regional pipeline of skilled workforce, develop recruitment and retention programs, and foster long-term collaboration between industry, government, and educational institutions. Without this organisation, the forest and wood products industry in the region will not be able to meet its future labour demands.

A regional skills and career support organisation will have a range of advantages for the industry, community and individuals. It can help create customised training programs, foster collaboration, develop recruitment and retention programs, and boost economic stability. It can also enhance career prospects, support lifelong learning, and strengthen communities.

Such an organisation will require four comprehensive objectives to be achieved, four full-time management positions within a flat organisational structure to maximise efficiency and collaboration, and a budget based on the size and scope of the organisation. There are five potential funding sources for the proposed organisation, including government funding, local industry partnerships and/or corporate sponsorships, industry associations, membership fees, and government tax benefits. Establishing such an organisation could face a number of risks that may impede its successful launch and operation. However, with effective risk management, the organisation can still achieve its objectives.

ATTACHMENT 1: RECOMMENDATIONS FROM THE REGIONAL FORESTRY HUB'S 2022-2023 STUDY

The Regional Forestry Hub's 2022-2023 study on the current and future skills and training needs of the forest and timber industry in South and Central Queensland resulted in 13 recommendations to support the industry in addressing its workforce skills and training needs. These are outlined below.

I. Prioritising Regional Skills and Training Programs

- Recommendation 1: Work with industry experts to prioritise regional skills and training needs associated with each industry sector, placing a particular focus on critical occupations. This should build on the insights and needs identified in this report.
- Recommendation 2: Identify available training options to bridge priority skills gaps and shortages. Evaluate these options. Coordinate and facilitate collaboration between employers and training organisations to establish regional training programs.
- Recommendation 3: Investigate what financial grants and incentives are available to businesses that invest in staff development and training, such as apprenticeships, internships, and other on-the-job training initiatives. Once this information is obtained, disseminate it to employers.

II. Developing Tailored Training Programs

- Recommendation 4: Establish partnerships to create and implement tailored training programs and materials to address priority skills gaps and shortages in the region, where needed. These partnerships should provide collaborations and resources such as funding, mentorship, and other support.
- Pair businesses with educational and training organisations and government grants to develop tailored training programs, such as industry-based micro credentials or modules aligned to national training packages, to enhance the skills and competencies of existing workers in line with regional business/sector priorities.
 - Connect employers with national programs and initiatives that focus on developing training resources and programs to address skill shortages, such as the initiative for forester occupations by AFPA and Forestry Australia; or improve workforce skills, particularly in relation to emerging technologies and trends.
 - Advocate for the continuous improvement of training resources and programs to ensure training meets the changing demand of the industry.
- Recommendation 5: Encourage region/industry-wide mentorship programs to provide an opportunity for experienced professionals, including those who are retired or transitioning to retirement, to share their knowledge and insights with those who are just entering the industry or in need of training.

Recommendation 6: Establish partnerships to develop and maintain a future generation of workplace trainers and assessors. These individuals should be drawn from existing workforce and should be available for training activities on priority skills in the region on an ongoing basis. These partnerships require an effective teaching resource/training organisation to deliver the Certificate IV in Training and Assessment, funding to incentivise the uptake of this training, a full and continued commitment from businesses, and support to transition qualified workplace trainers into teaching roles.

III. Supporting a Regional Pipeline of Skilled Workforce

Recommendation 7: Support activities that provide educational opportunities to local communities, showcasing success stories, and emphasising career development options to change people's perspectives of the industry and draw in new, non-traditional forestry workers. Such activities may include:

- Invite representatives from schools, universities, training organisations, career counselling services, job placement services and communities to visit industry operations and learn about the career paths and skills required in the industry.
- Provide information sessions, workshops, videos and infographics about the industry, its potential, and future growth opportunities to increase awareness of the industry within local communities and attract new workers.
- Showcase success stories of individuals who have found success within the industry. This will support creating a positive perception of the work and demonstrate the potential rewards of working in the industry to potential employees.
- Promote jobs, entry requirements, training and career development opportunities available in the industry to raise awareness of the breadth and depth of our industry in the region. Use different forms of promotional material and through social media to reach out to students, teachers and parents to give them an opportunity to explore the industry in an accessible and passive way.
- Use the assistance of trade unions and other workforce development organisations, such as Group Training Organisations, to find, locate, source and/or train qualified workers for the industry.
- Develop internships programs that provide students with exposure to multiple industry sectors, roles, and locations. This will allow them to gain valuable experience in the industry and make an informed decision about the career path they wish to pursue.

Recommendation 8: Establish and maintain long-term partnerships and activities with local schools to provide teachers, students and parents with a wealth of specialised timber knowledge and insight into many different career pathways. These engagements may involve activities to incorporate forestry aspects and educational materials (e.g., ForestLearning) into the

school curriculum (e.g., STEM, Geography); supporting school-based apprenticeships and traineeships in forestry/timber processing for year 10, 11 or 12 students; setting up programs such as industry tours for senior students; and facilitating student-based projects related to the industry and its topics and issues.

IV. Developing Recruitment and Retainment Programs

Recommendation 9: Support regional recruitment and retention strategies to reach a diverse pool of potential candidates and encourage businesses to foster a people-centred culture. Such activities may include:

- Develop and implement a regional recruitment plan in accordance and collaboration with the national approach to ensure that businesses are able to reach a broad and diverse pool of potential candidates and recruit the right people for the right roles. This plan should include job descriptions, job postings, entry requirements, identifying potential recruitment sources, and leveraging social media to advertise job openings.
- Encourage businesses to take a progressive approach to manage a sustainable workforce and create a people-centred culture. This includes providing professional support to businesses to foster a positive work environment and offer educational opportunities to develop the skills of entry-level workers (new hires). These initiatives should focus on teaching the value of work ethic, self-management and teamwork, as well as providing professional development of existing workers and job retraining programs, helping workers to learn new skills or transition into different jobs.

V. Improving Resources and Programs

Recommendation 10: Support businesses/sectors to develop and maintain workforce development and succession plans at a regional level, and use data and analytics on employee skills, job roles, and career paths for future skills and training planning.

Recommendation 11: Support industry-focused professional development centres, events, and online platforms for workers to access the latest materials and resources that build on and expand exiting technical webinars and initiatives of industry organisations such as Timber Queensland, Forest and Wood Products Australia (FWPA), Forestry Australia, Responsible Wood, Frame and Truss Manufacturers Australia (FTMA).

Recommendation 12: Monitor and seek out opportunities that leverage government and industry resources to provide subsidised or free training courses. Promote these opportunities to maximise their potential. Additional activities may include:

- Advocate for allocating special funding towards the high cost training per learner in thin (small, regional and remote) markets to: a) reduce the financial risks that RTOs face when delivering to our industry; b)

ensure that employers can compensate the costs associated with training so that they are motivated to upskill and train their employees as a means to eventually improve productivity, safety and employee retention; and c) assist learners with the travel and accommodation expenses when they need to travel to an appropriate RTO or learning event (e.g. interstate).

- Ensure that industry bodies, businesses and the VET Industry Skills Adviser (Primary Industries) of the Queensland Department of Employment, Small Business and Training collaborate to provide the State Government with advice on skill shortage in our industry. This advice should be used to inform the updating of the Queensland Priority Skills List⁵ and Queensland Skilled Occupation Lists (QSOL)⁶, which set priorities for the allocation of training funding, employer incentives for apprentices and trainees, and skilled visa to fill critical skill shortages across the state.

Recommendation 13: Encourage businesses to take advantage of [the national system for skills verification](#). This online system records training and verifies the currency of worker skills. It allows businesses to keep track of their employees' skills, making sure that they have undertaken the necessary nationally recognised training and have kept their skills up to date through regular practice, both for high-risk and non-high-risk tasks or activities. It ensures that teams remain compliant with legislation and standards.

VI. Regional skills and career service organisation

Recommendation 14: Establish a regional skills and career hub to deliver on Recommendations 1 to 13 to support the five themes: prioritising regional skills and training programs, developing tailored training programs, supporting a regional pipeline of skilled workforce, developing recruitment and retainment programs, and improving resources and programs. The regional skills and career hub should engage with relevant industry organisations and partners to ensure that there is a structural alignment at the regional, state and national levels, with respect to the work and activities being undertaken.

⁵ <https://desbt.qld.gov.au/training/providers/funded/priority-skills-list>

⁶ <https://migration.qld.gov.au/occupation-lists>