



GREATER WHITSUNDAY ALLIANCE  
MACKAY ► ISAAC ► WHITSUNDAY



# Greater Whitsunday Future Skills Roadmap



# Greater Whitsunday Future Skills Roadmap

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# Mackay Regional Jobs Committee

Greater Whitsunday Alliance (GW3) was funded by the Queensland Government's Department of Employment, Small Business and Training (DESBT) to deliver the *Mackay Regional Jobs Committee* project. The project collated information and data to better understand the expected workforce impacts of the Fourth Industrial Revolution across the Mackay Isaac Whitsunday region and inform policy around future jobs and employment needs. The project specifically focused on emerging skills needs, and gaps and strategies to address these to ensure that the region's workforces are prepared for the jobs of the future.

## GW3

GW3 is the peak independent economic development organisation for the Mackay Isaac Whitsunday (Greater Whitsunday) region, creating opportunities for the region to realise its full potential. GW3 delivers a range of economic development focused projects to help support and promote prosperity across the region. A key focus of the organisation is to prepare our region's workforces and businesses for impacts from digital technology and ensure that our regional workforce remains resilient.

# Fourth Industrial Revolution



**The Fourth Industrial Revolution is expected to be driven by the increasingly rapid evolution of technology and the subsequent frequency and complexity of interaction between humans and technology in workplaces, social settings, homes and daily lives.**

While there are many variable factors that will determine the level of impact of the Fourth Industrial Revolution, GW3 recognises that change is upon us and it is vital that regional workforces across all industries are skilled and prepared for the jobs of tomorrow. Preparing workforces for the future lies in collaborating with employers, industry groups, educators and key stakeholders to understand industry, job and workforce needs, which ties in with the objectives of the *Mackay Regional Jobs Committee* project. The *Mackay Regional Jobs Committee* project focused on projecting workforce impacts up to 2030, which is consistent with other regional activities focusing on future workforces and is projected as far as current foresight allows.

# Project Overview

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This project collated information from local industry groups, training providers, local employers, council and government representatives to identify key areas of projected employment transformation and local training, skills and workforce development needs.

The intention of this report is to provide local intelligence to inform DESBT of training, skills and workforce development needs and gaps within the region and recommendations around how these can best be met. The *Mackay Regional Jobs Committee* included representation from key industries and employers including Agriculture, Construction, Retail, Mining and Health Care and Social Assistance. It also included representation from training and education providers, as well as local and state government representatives. *Mackay Regional Jobs Committee* members were responsible for connecting with their networks to broaden stakeholder engagement and feed information and data back into committee discussions.

The *Mackay Regional Jobs Committee* operates as a working group of the Create Our Future Steering Committee. The Create Our Future Steering Committee ensures that the Greater Whitsunday region has an appropriate response to the changing nature of work and the impacts of the Fourth Industrial Revolution. The *Mackay Regional Jobs Committee* project was delivered alongside the *Mackay Isaac Whitsunday Future Employment Study*, which helped inform the recommendations of the *Mackay Regional Jobs Committee* project. The *Mackay Isaac Whitsunday Future Employment Study* combines both qualitative and quantitative analysis of the expected impact of technology at an occupational level within the Greater Whitsunday region. The alignment in findings between the *Mackay Isaac Whitsunday Future Employment Study* and the *Mackay Regional Jobs Committee* projects demonstrated the validity of the data collected within the *Mackay Regional Jobs Committee* project.



# Our Region

**The Greater  
Whitsunday  
region is one of  
the true economic  
powerhouse  
regions in  
Queensland and  
Australia.**

The economy of the Greater Whitsunday region offers diverse investment opportunities with a proven track record for growth and prosperity. The Isaac region is home to the Bowen Basin, housing the largest coal mining deposits in Australia. Most of Queensland's prime coking coal reserves are mined here, including the highest-grade metallurgical coal in the world. Mackay is the centre of one of Australia's most developed Mining, Equipment, Technology and Service (METS) industries and has enormous bio-futures potential. The Whitsundays is not only a world-class tourism destination, attracting more than a million visitors annually, but is a highly developed food producing region with sugar cane, horticulture and aquaculture.

The Greater Whitsunday region spans an area of more than 90,000km<sup>2</sup>, has a permanent regional population of close to 173,006 and contributes more than \$24,381 billion to the national economy. The economy of the Greater Whitsunday region is as diverse as it is wide and has a proven track record as a region for not only growth and prosperity, but also resilience.

Greater Whitsunday  
region spans over  
**90,354 km<sup>2</sup>**



**GRP - \$24,381 billion**  
for Mackay Isaac Whitsunday



**Population - 173,006**  
for Mackay Isaac Whitsunday

# Regional Industries and Workforces

The current largest employing industries, by number of people employed, across the Greater Whitsunday region are Mining and METS, Health Care and Social Assistance, Retail and Construction.

» Image 1 - Current distribution of employment in Mackay Isaac Whitsunday region by industry (2019 data)

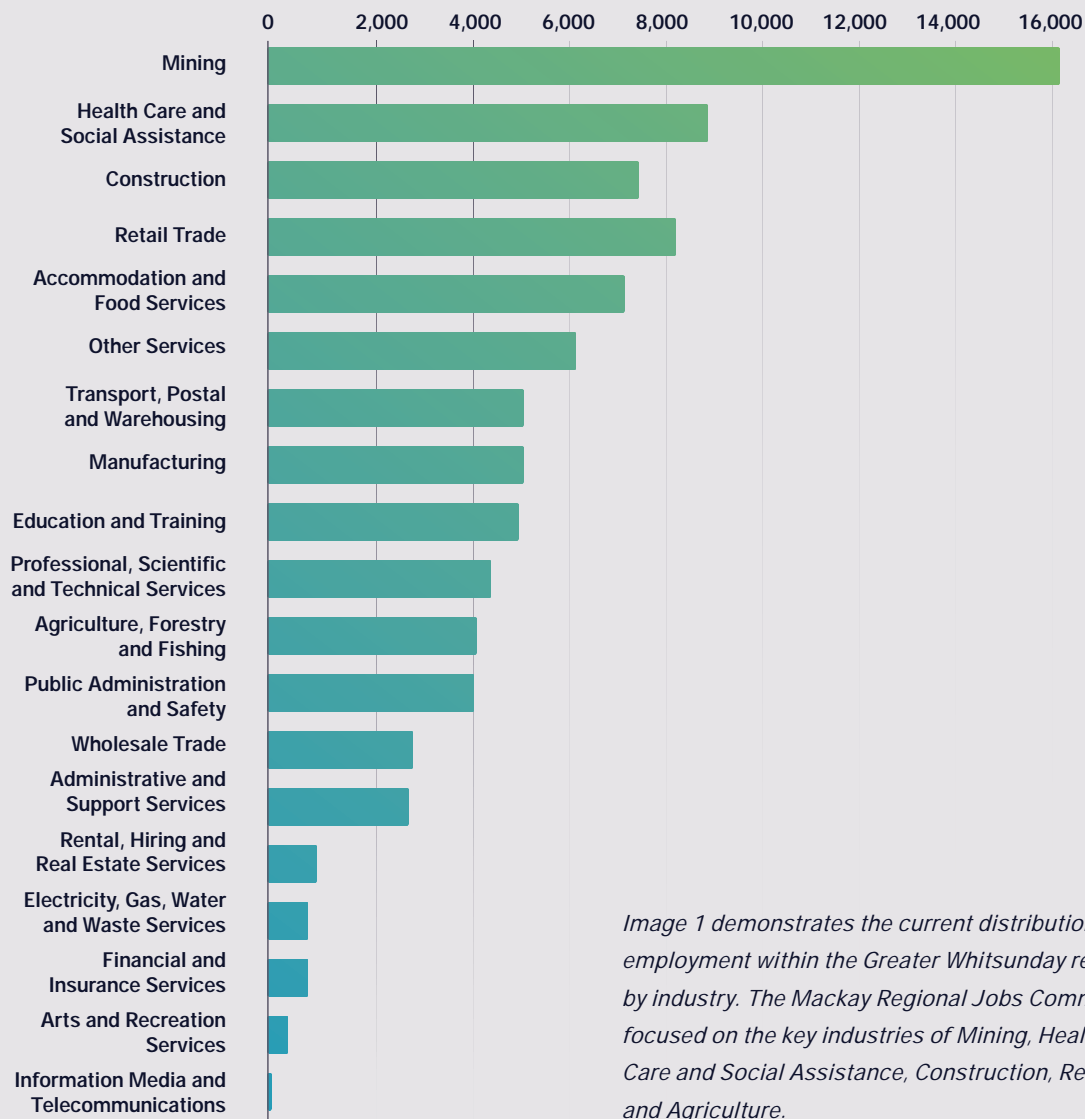


Image 1 demonstrates the current distribution of employment within the Greater Whitsunday region by industry. The Mackay Regional Jobs Committee focused on the key industries of Mining, Health Care and Social Assistance, Construction, Retail and Agriculture.



Jobs Queensland employment projection data to 2024 indicates that Mining will continue to remain the largest employer within the region, however the greatest jobs growth industries, by additional positions created, will be Construction and Health Care and Social Assistance.

» Image 2 - Projected jobs growth by industry in Mackay Isaac Whitsunday between 2019 and 2024

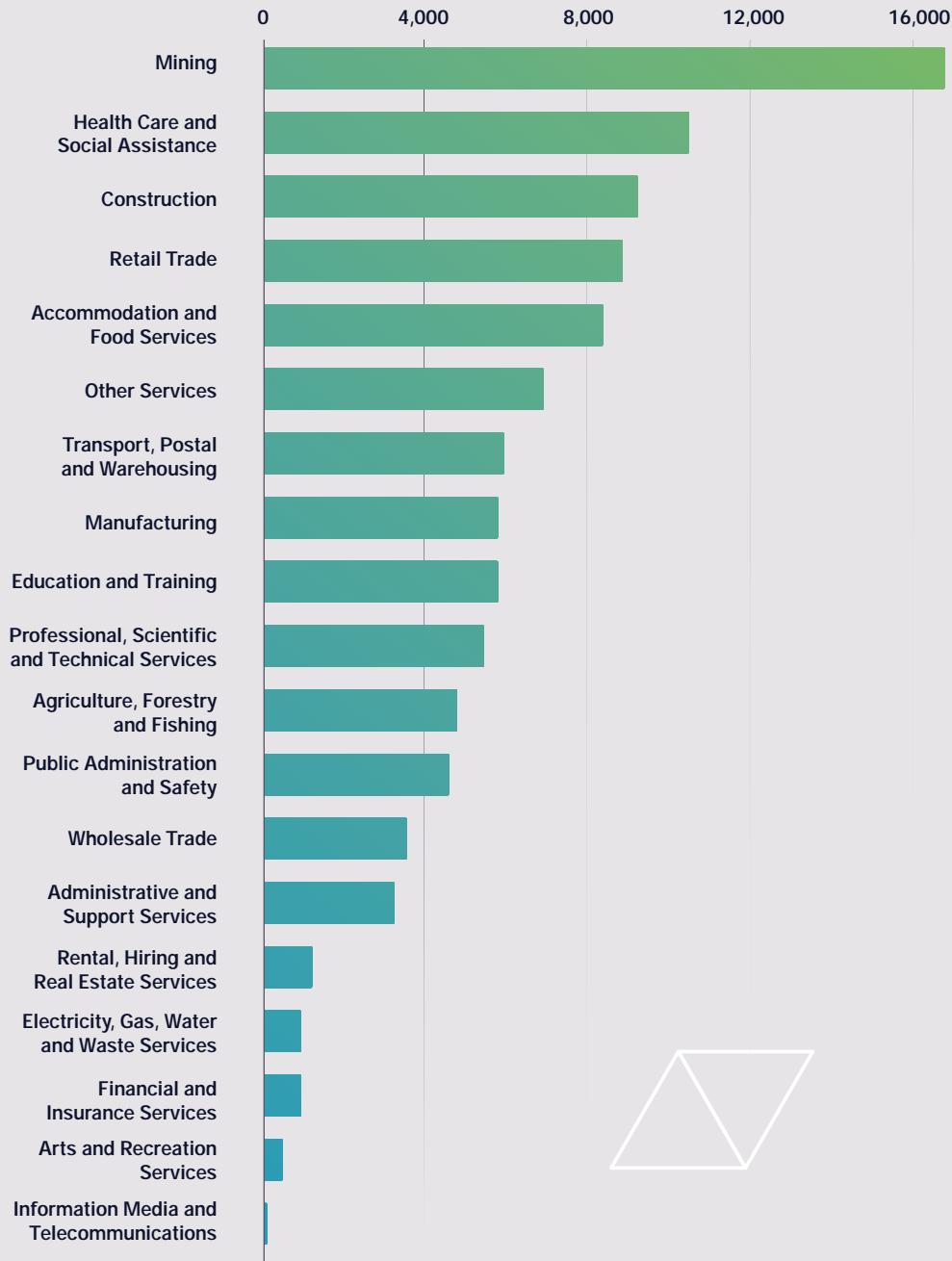
## Where are the new jobs?



Source: Jobs Queensland

- Financial and Insurance Services – 45
- Electricity, Gas, Water and Waste Services – 43
- Arts and Recreation Services – 33
- Information Media and Telecommunications - 7

» **Image 3** – Employment projections by industry in Mackay Isaac Whitsunday in 2024



Source: Jobs Queensland

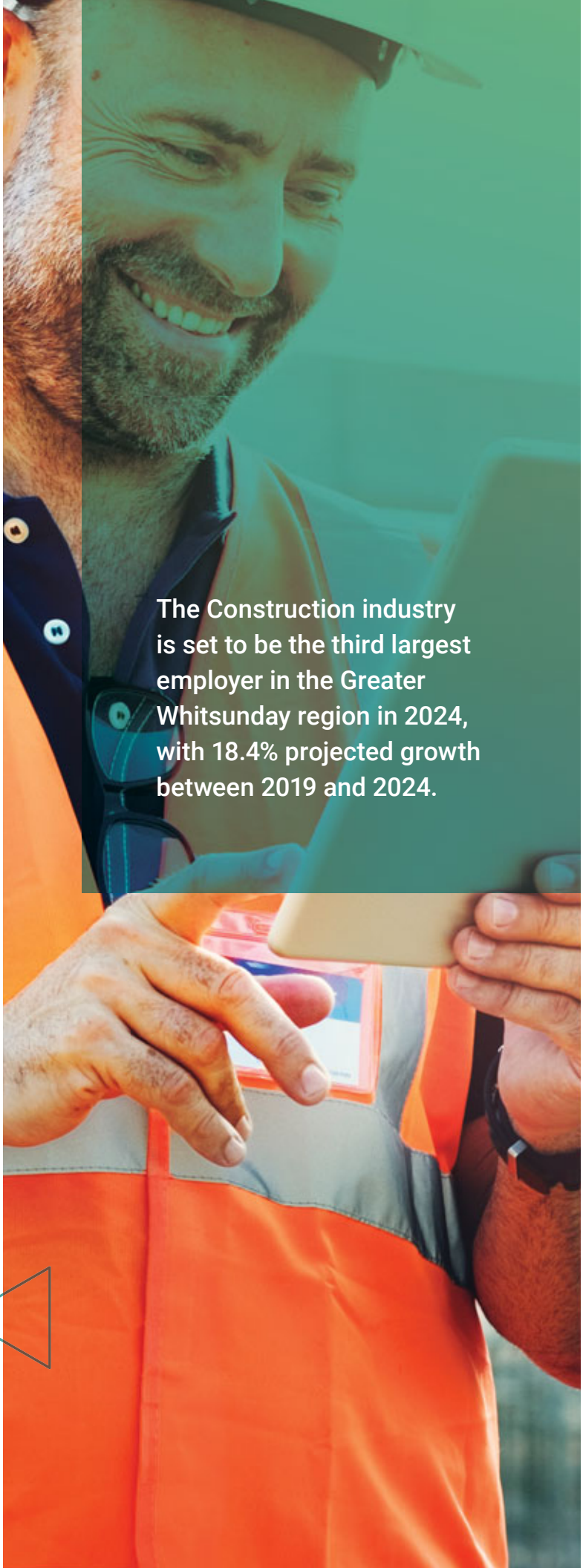


# Construction Industry

The Construction industry is expected to experience changes across many job roles, with routine manual tasks being replaced, or supplemented, by technology. This will lead to widespread change across all workforces within the industry who will be required to adapt to working with new technology.

The industry will also be impacted by modular construction practices, which will see an increase in manufacturing and installation-based building practices. Climate change, environmental sustainability and the impacts of COVID-19 will also lead to changes in construction practices and building design.

Despite these impacts, the Construction industry is still expected to see significant workforce growth within the region in the coming years. Workforces will need to improve their skills in digital foundations, basic data skills, using job-related technology, understanding and implementing emerging compliance and regulation requirements, and communication skills.



The Construction industry is set to be the third largest employer in the Greater Whitsunday region in 2024, with 18.4% projected growth between 2019 and 2024.



# Mining and METS Industry

The Mining and METS industry is the largest employer within the region. It is difficult to differentiate between Mining and METS jobs and the projected impacts of the Fourth Industrial Revolution, given that much of the current METS sector is directly connected to mining activity.

METS-based businesses within the region are being encouraged to explore opportunities for diversification that extend beyond coal mining, however at this time the analysis of workforce impact on this sector remains connected to mining.

Jobs Queensland predicts that, based on current available data, there will be limited growth in the Mining workforce in the future. The Fourth Industrial Revolution is already in motion within the local Mining sector, with the introduction of automated trucks across two mine sites within the region.

Much work is already being done to ensure that regional workforces can adapt to the introduction of automated vehicles, including through the Queensland Future Skills Partnership, which is a collaboration between industry

and training and education providers to fast track new skill development training packages to meet emerging needs. There is expected to be diversification in new job roles connected to the introduction of new technologies within the sector.

The long-term forecast for Mining jobs in the region is difficult to predict due to a varied range of future economic factors. As Greater Whitsunday's largest employing sector, it is important that the region is proactive in counteracting any future workforce displacement through exploring upskilling and cross industry employment opportunities.



# Agriculture Industry



High levels of variability within the Agriculture industry make it difficult to project future workforce trends, however data trends generally indicate that the region will see industry growth in the future.

There are several key regional economic projects that are likely to have a positive impact on the Agriculture workforce in the future, which are not currently captured within the Jobs Queensland and Mackay Isaac Whitsunday Future Employment Study data.

This includes the Greater Whitsunday region being recognised by the Queensland Government as a favourable location to increase economic participation in the emerging global bio-futures industry, including the current Queensland Government prospectus to establish a Future Foods Bio-Hub in the region.

Aquaculture is another sector within Agriculture that is expected to see significant jobs growth. In a media release from July 2020, Queensland Premier and Minister for Trade, Anastasia Palaszczuk, identified that the Greater Whitsunday region is one step closer to benefitting from a \$257 million investment by seafood company Tassal Group, which is expected to create up to 1000 operational jobs in Aquaculture once this project is realised.

While automation and augmentation are likely to have an impact on occupations within the Agriculture industry, most of these impacts will be absorbed within the projected occupation growth. In alignment with other industries, the key upskilling requirements to ensure successful transition of the Agriculture workforce will be digital foundations, skills in using work-related technology and enterprise skills in agility and adaptability to be able to respond to constantly changing workforce demands.

# Health Care and Social Assistance Industry

The Health Care and Social Assistance industry within the region is predicted to grow by 13.7% by 2024, according to Jobs Queensland data.

*Mackay Isaac Whitsunday Future Employment Study* predicts high jobs growth areas within the industry in the next 10 years, including Registered Nurses across a range of specialisations, Aged and Disabled Carers, Nursing Support Workers and Welfare Workers. In line with reports such as the Australia Institute's "Jobs Growth in Queensland Trends and Prospects", local Health Care and Social Assistance representatives project that there will also be ongoing growth within allied health workforces across the region. While the *Mackay Isaac Whitsunday Future Employment Study* identifies that there is expected to be considerable automation and augmentation impact on a range of professions in the Health Care and Social Assistance industry, most impacts will be offset by the projected jobs growth.

There is expected to be an accelerated shift towards more consumer choice driven service demand across vast areas of the Health Care and Social Assistance industry. There will be increasing home-based care, with hospital-based

care becoming even more acute care focused, which will lead to health care workers needing education experiences that enable them to adequately respond to the needs of presenting patients, as well as education opportunities that enable them to diversify their skills beyond their routine job skills.

Given that key growth areas within Health Care and Social Assistance, such as Registered Nurses and other medical and caring roles, are jobs which require vocational or tertiary qualifications, it will be important to implement strategies to ensure that education and training options remain relevant and agile so that the right skills can be attained in the right timeframe to fulfil future workforce demands. Other emerging skill needs for the Health Care and Social Assistance industry include digital foundations, data skills, use of workplace technology, analytical thinking, problem solving, understanding and responding to regulation, communication and growth mindsets.

# Retail Industry



**Retail is projected to be the fourth biggest employing industry in the region in 2024, according to Jobs Queensland projections, however jobs growth will be low at 2.4% between 2019 and 2024.**

Retail is already a rapidly changing industry with far-reaching impacts resulting from the broad adoption of existing technologies, as well as the influence of social media. COVID-19 has further accelerated expectations and demand around online retail and the Fourth Industrial Revolution is expected to show even more impacts.

Retail is moving away from the immediacy of the customer service model to a customer experience model, which requires skills in generating genuine engagement in meaningful experiences that extends well beyond the securing of a purchase. While Retail stakeholders have identified that there is already a need for Retail workforces within the region to upskill in the customer experience model, the emerging trends in consumerism set to accelerate in the future mean that these skills will become increasingly important for workforces across all industries that deliver products or services.

There are many offerings for customer experience training online or out of region, along with other important consumer facing training such as marketing and social media, however it is difficult to determine quality training that has been developed around well researched methodologies. There is also a need to elevate the importance of skills development within these skillsets within the region, and therefore a need to deliver regionally targeted training opportunities.

Critical future areas for skill improvement for Retail include basic numeracy and literacy skills, basic digital foundations, a broad range of enterprise skills, especially communication, including written, verbal and the ability to communicate across a range of platforms such as phone, email, direct messaging and social media, as well as increasing skills in problem solving, project management and infection control processes.



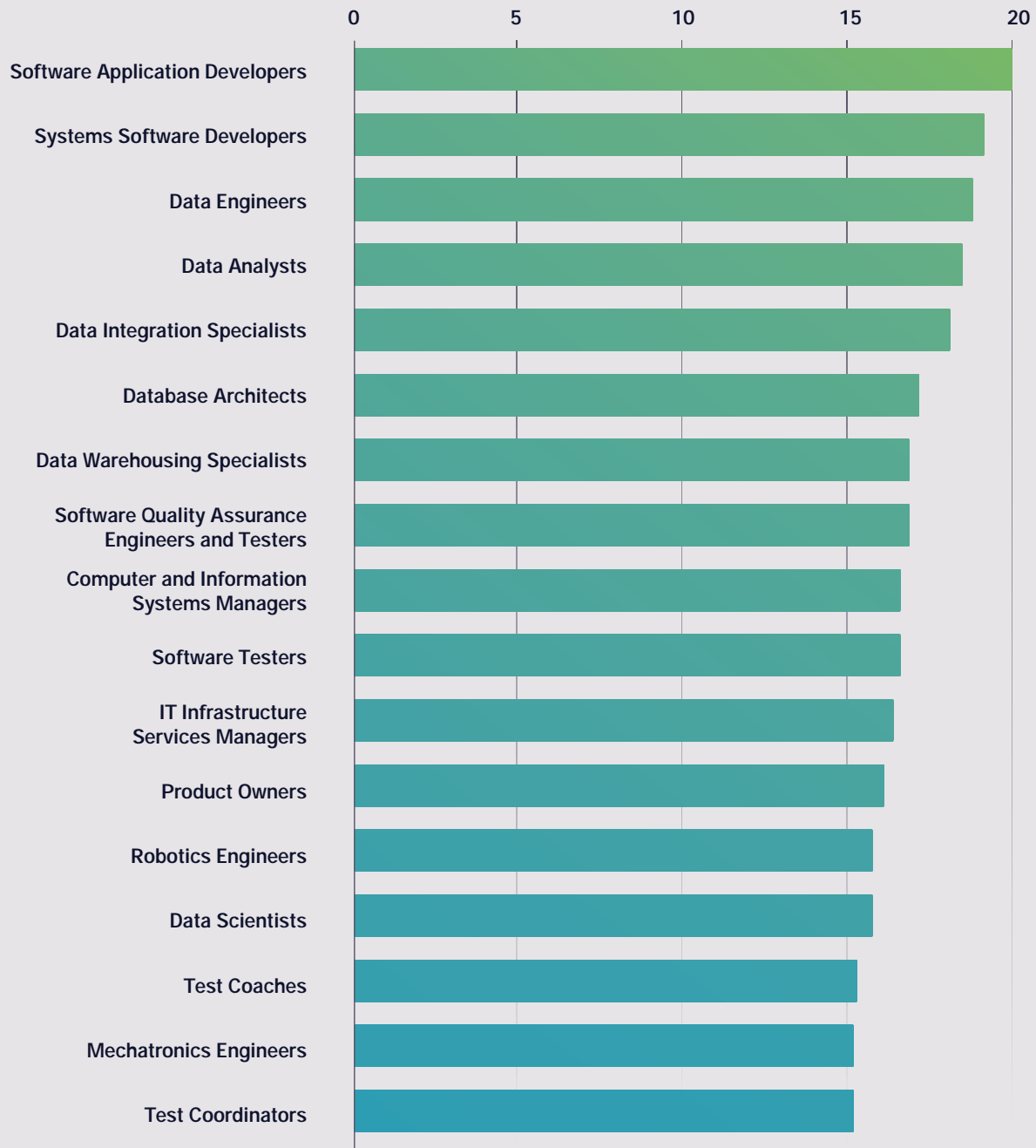
# Key Workforce Growth Areas Across Industry

In addition to traditional workforce growth, the GW3 Future Employment Study drew from data on the Faethm platform, an artificial intelligence platform that predicts the workforce impact of dynamic forces, to identify significant growth in Information and Communications Technology (ICT) and Engineering workforces within the region.



Faethm predicts that there will be over 3,000 jobs created within the region in the next 10 years in ICT and Engineering roles. Image 4 demonstrates that the majority of these roles will be Software Developers – Applications, Software Developers – Systems Software, along with a range of data and analyst roles. It will be important to ensure that emerging workforces are directed towards these jobs and provided with opportunities within the region to complete the required education and training for these roles.

» **Image 4** – Jobs added to implement emerging technologies by 2030



Source: Faethm



# Key Strategies For Developing Greater Whitsunday Skills for the Future

Ensuring Greater Whitsunday workforces are able to develop the skillsets and fill available roles in the future will require a combination of strategies to ensure that skill development opportunities are not just offered, but that they meet the needs of the industries and employers, and that there is timely uptake from workforce participants within the region.

**Under the *Mackay Regional Jobs Committee* project, GW3 has engaged with key stakeholders to identify the emerging skills needs and gaps, and to develop recommendations to respond to these, in order to ensure that Greater Whitsunday workforces remain adaptable, resilient and employable in the face of change.**

The recommendations have been grouped into “pillars” and developed in consultation with local industry representatives, training and education providers, local employers and representatives from local and state government. Therefore, responses to the recommendations will require leadership and action from a range of stakeholders, based on their strategic focus and areas of influence.

- 1** Equip regional workforces with the foundation skills required to effectively participate in jobs impacted by the Fourth Industrial Revolution.
- 2** Establish in-region skills development opportunities in the region, which align to emerging future workforce needs.
- 3** Prepare transitioning workforces impacted by the Fourth Industrial Revolution.
- 4** Respond to workforce growth areas and industry needs of the future.



# Pillar 1

## Equip regional workforces with the foundation skills required to effectively participate in jobs impacted by the Fourth Industrial Revolution.

Data from the *Mackay Regional Jobs Committee* identified that there is a consistent range of key foundation skills that will be required across all workforces to ensure that workforces remain employable into the future.

In considering future foundation skills, the *Mackay Regional Jobs Committee* focused on new entry workforces, which encompasses school leavers and early career workforce participants, as well as transitioning workforces, which encompasses both people who are unemployed, as well as existing workforces who will need to upskill, reskill or adapt to changes in tasks, job roles or careers due to the impacts of the Fourth Industrial Revolution.

The *Mackay Regional Jobs Committee* identified foundation skills within the categories of enterprise skills and core skills.

The priority foundation skills for the following workforce areas are -

### New Entry Workforces

#### Enterprise skills

- » Basic communication;
- » Digital communication across a range of platforms;
- » Conflict resolution;
- » Problem solving;
- » Resilience and adaptability;
- » Ability to work independently.

#### Core skills

- » Digital literacy;
- » Basic numeracy and literacy.

### Upskilling / Transitioning Workforces

#### Enterprise skills

- » Basic communication;
- » Digital communication across a range of platforms;
- » Agility and adaptability /growth mindset;
- » Problem solving;
- » Analytical thinking;
- » Active listening.

#### Core skills

- » Digital literacy;
- » Basic data skills;
- » Cyber security;
- » Job-related technology;
- » Emerging technologies;
- » Working alongside automation.

### Employers and Managers

#### Leading people through change

- » Communication, including negotiation;
- » Fostering growth mindsets;
- » Fostering organisational resilience;
- » Developing enterprise skills within workforces;
- » Workforce planning skills.



Enterprise skills are more commonly referred to as soft skills, however the *Mackay Regional Jobs Committee* felt that the language around these skills needed to shift to reflect their emerging importance moving forward. Enterprise skills include higher cognitive skills such as critical thinking, problem solving, innovative thinking and change management, social and emotional skills such as communication, collaboration, emotional intelligence and ethics, and resilience and adaptability skills. The *Mackay Regional Jobs Committee* identified that, in line with broader future skills research such as Anders Sorman-Nilsson's report "ING Future Focus Preparing for the digital workforce of tomorrow", enterprise skills will be equally as important as technical and Science, Technology, Engineering and Maths (STEM) skills in future workforces within the region.

Core skills refer to those skills that stakeholders identified are going to be required across broad reaching workforces in the future and essentially need to form the foundation of education and training programs targeting both new entry and transitioning workforces. Core skills identified by the *Mackay Regional Jobs Committee* as being most important for future workforces within the region include basic literacy and numeracy, digital foundation skills, basic data skills, cyber security skills and skills in using job-related and emerging technologies.

While ensuring the region provides potentially impacted workforces with access to training and development opportunities which align to the emerging skills needs

and gaps, it is also just as important to implement strategies that support employers, industries and other key stakeholders to understand the impending workforce impacts and support their workforces to prepare for the transitions ahead. It will be important to upskill Managers and Leaders to effectively manage change, promote resilience and develop workforce transition plans and pathways, implement strategies to attract new entry workforces into emerging growth areas, as well as attract new long-term workforce participants to the region.

**“*Enterprise skills are generic skills that are transferrable across different jobs. They have been found to be as powerful a predictor of long-term job success as technical knowledge and will be increasingly important into the future*”**

(Development Economics 2015, Kahn et al 2012, Casner-Lotto & Barrington 2006, cited in FYA 2016)]

# Pillar 1 Recommendations

**1.1. Advocate to Education Queensland regarding the education focused priorities identified by the Mackay Regional Jobs Committee.**

**Promote these opportunities:**

- » Align key foundation skills across all school students with the needs of employers;
- » Elevate enterprise skills within core curriculum, including assessments and identified attainment in the priority skill areas;
- » Deliver enterprise skills development opportunities to broader student cohorts, including broader access to accredited courses such as Certificate II in Self-Awareness and Development, participation in school-based skill development opportunities, such as development sessions currently targeted at school leaders, and building development and recognition of enterprise skills capabilities into work experience activities;
- » Improve literacy and numeracy and workplace relevant digital foundations skill attainment for school leavers.

**1.2. Incorporate enterprise and core skills into career entry level training such as apprenticeships, traineeships and vocational work placements by working with key industry groups, government and training bodies.**

**Opportunities to explore:**

- » Review the language and labelling around these skills to align with the emerging importance in employability, including –
  - Soft skills to be consistently referred to as enterprise skills;
  - Certificate II in Self-Awareness and Development to be retitled to better convey skill attainment to employers, e.g. Certificate II in Enterprise Skills.
- » Build assessable enterprise and digital foundation skill units into core qualifications in all industries;
- » Offer micro-credentialing in the identified foundation skills sets to address identified skills gaps and reduce barriers to accessing micro-credentialing units already offered, such as broader promotion of micro-credentialing opportunities already available to the region.

**1.3. Build retention in employment and employment transition pathways by working with key industry groups and government, and training.**

**Opportunities to explore:**

- » Develop an online system to enable transitioning workforces to assess and demonstrate their attainment in enterprise skills and address skills gaps via micro-credentialing, taking inspiration from models such as the Engage Victoria Micro-Credentialing of Enterprise Skills pilot;
- » Adapt existing programs which focus on enterprise and core skills development, such as those offered to long-term unemployed persons, to be accessible by anyone needing to upskill or reskill;
- » Provide opportunities and incentives to complete micro-credentials in the identified skill priority areas;
- » Develop workforce transition plans to support employees to understand future pathways and the importance of upskilling.

**1.4. Upskill employers and managers in enterprise skills that will enable them to manage change, create organisational resilience and foster enterprise skills within their own employees.**

**Opportunities to explore:**

- » Increase employer and manager uptake of skill development opportunities in leading people through change, fostering growth mindsets, high level communication, including negotiation and fostering organisation resilience;
- » Promote the importance of enterprise and core skills in workforces of the future and encourage employer investment and development in these skills within existing workforces.

# Pillar 2

## Establish in-region skills development opportunities which align to emerging future workforce needs.

The experience of local employers is reflective of broader research, which identifies that people who have lived in the region for an extended period are much more likely to stay within the region and within jobs for a longer period.

Therefore, enhancing the capacity of the region to offer in-region skills development opportunities which align to emerging workforce opportunities will remain an important attraction, retention and skill development strategy for future workforces, especially in projected workforce growth areas such as Health Care and Social Assistance and Agriculture, including Aquaculture.

It will also be important to make sure that skill development opportunities are made available within the region, which align to both the emerging workforce needs and the content and delivery expectations of local industries and employers.

Thin student markets were identified as a key challenge to attracting skill development courses to the region and identifying innovative strategies to create commercial viability for training providers will be important in meeting this regional need. This includes exploring opportunities for a central point of collation for skill development interest within the region both across schools, and external to schools, to maximise course participant numbers to attract skill development opportunities to the region.

Using the expertise that exists within the region, as well as attracting new training providers to base themselves within the region, provides opportunities to develop skill focused training hubs that will provide additional skill development and economic benefits to the region.





Strategies to immerse individuals in workforce experiences and promote workforce opportunities within key growth areas will also be important to ensure that new entry and transitioning workforces are supported to remain engaged in employment within the region.

The regional focus needs to shift from the delivery of broad promotional strategies targeted towards school leavers, to more targeted and experiential engagement of both new entry and transitioning workforces, with improvement in delivering skill development and career information to post school audiences. Career support models, which include one on one discussions around career goals and the consequent mapping of skills development pathways, need to be expanded to be delivered to all people in workforce transition, including those currently engaged in the workforce. This will become increasingly important as more workforces are displaced by technology. In addition to this, increased opportunities to engage in experiential workforce offerings, as well as increased workplace exposure, is also seen as critical to attracting and retaining people in lesser known and emerging workforce opportunities in the future. This includes exploring new and innovative work experience models, which can be adapted to better suit employer and student needs, such as larger blocks of experience during school time.

The *Mackay Regional Jobs Committee* also felt that current career expo models do not adequately engage people in purposeful and effective conversations around future career goals, and need to be adapted and reimagined to better capture the projected workforce impacts of the Fourth Industrial Revolution, to ensure that people are exposed to the variety of job opportunities that are becoming available within the region, and to ensure that people are exposed to skillsets that are likely to keep them retained in employment long-term.

Exposure to emerging technologies, including opportunities to engage in training using technology such as virtual reality and augmented reality, as well as training in workplace technology were also seen as important. Stakeholders identified that students would be provided with more relevant training and education if there was a way to align relevant course content with training packages that were developed by manufacturers for common workplace technologies, especially in sectors such as Health. There is also opportunity in exploring models such as the Packages of Learning Pilot currently being delivered in Tasmania, which focuses teaching within targeted Australian Curriculum learning areas within four priority industries.



# Pillar 2 Recommendations

## 2.1. Develop and implement strategies to retain and attract regional residents into key workforce growth areas.

### Opportunities to explore:

- » Increase connections between industry, schools, training and tertiary educators to ensure the workforce pathways that are being offered and promoted align with future workforce demands;
- » Enhance promotion and engagement strategies of regional workforce opportunities;
- » Reduce the barrier of skill development costs to the individual;
- » Enhance the awareness of personnel who offer career advice within the region around emerging workforce opportunities;
- » Develop industry champions to promote emerging job opportunities within the region to schools and transitioning workforces;
- » Increase workplace exposure during training and study;
- » Re-imagine local career promotion activities to be more engaging and targeted towards individuals. Career promotion activities should be delivered to both new entry and transitioning workforces and provide the opportunity to highlight skillsets which demonstrate agility and transference opportunities for future careers.

## 2.2. Provide new opportunities in the region to address emerging skills needs and gaps.

### Opportunities to explore:

- » Develop models for a coordinated approach to collating the skill development needs of individuals across the region, including both school-based and non-school training candidates, to capture accurate course participant numbers;
- » Develop collaborative strategies to address thin course markets and attract training providers to the region;
- » Develop targeted skills training hubs;
- » Increase access to emerging education and training technologies, such as virtual reality and augmented reality, as well as current workplace technology.

## 2.3. Align training opportunities within the region to industry needs and standards.

### Opportunities to explore:

- » Develop education and training offerings for the future by referencing regional data sources, including the Future Skills Roadmap and the Future Employment Study;
- » Increase collaboration between industry representatives and training providers to develop course content that meets current industry expectations, standards and needs.

# Pillar 3

## Prepare transitioning workforces impacted by the Fourth Industrial Revolution.

While previously it has been adequate for industries and employers to remain focused on prioritising skill development based on immediate needs, the Fourth Industrial Revolution will require us to improve our capacity to upskill in a proactive and preventative manner.

Therefore, in order to maximise the future opportunities available to our region, it will be critical for us to get better at motivating people to develop skills while they are still engaged in employment, with a vision of preparing for jobs that don't exist yet.

In addition to developing key foundation skills, this includes encouraging industries and employers to take a level of responsibility for preparing their own workforces to have wider skillsets required for the future, strengthening opportunities for workforce transitions to comparable roles in aligning industries and improving access to career and skills development information, which align with emerging workforce demands.





Transitioning workforces that are negatively impacted by the Fourth Industrial Revolution into emerging workforce opportunities will be an important strategy in maintaining employability, despite the impacts of change. There are three key scenarios for maintaining employability for existing workforces that were discussed by the *Mackay Regional Jobs Committee*:

- 1 **Transitioning of existing workforces into new job tasks and roles within the same workplace/industry. This will require upskilling through micro-credentialing and short courses.**
- 2 **Transitioning people to similar jobs in aligning industries which are more resilient to the impacts of the Fourth Industrial Revolution due to a lag of impact or tasks that are less susceptible to automation and augmentation. These workforces will need to be supported to meet regulation and licensing requirements to successfully transition.**
- 3 **The final scenario is new career pathways, which will require people to develop a new skillset in order to fulfil the requirements of their career goals and may require a combination of not only recognising existing skills, but also participating in new skill development opportunities to upskill.**

All of these scenarios will require the delivery of individual workforce transition plans, which identify the existing skills gaps against the career goal and the development pathways to address these gaps. Jobs Queensland has a number of resources to support employers with workforce planning.

The Faethm platform has identified cross-industry employment pathways between a number of traditional sectors which project limited or uncertain workforce growth, and industries that have job corridor synergies and projected growth, providing opportunities to further explore cross-industry skilling pathways. According to Jobs Queensland data, the Construction sector within the Mackay Isaac Whitsunday region is projected to grow by 18.4% between 2019 and 2024. Therefore, it will be important to explore opportunities to filter transitioning workforces into the Construction industry in order to ensure regional workforce resilience into the future. Due to current skill set alignments, a cross-industry skilling pathway opportunity has been identified from Mining into Construction.

In addition to this, the Faethm platform identifies some job corridor opportunities between projected declining Retail roles such as Sales Assistants and Retail Managers and growth workforces in Health Care and Social Assistance such as Aged or Disabled Carers, Personal Care Assistants, Community Workers and Social and Community Services Managers. However, in the present climate, adequately skilled Retail workers remain in demand within the region and there is minimal appetite to explore this cross-industry skilling pathways at this time. The regional appetite to trial a Mining into Construction cross-industry skilling pathway will provide opportunity to develop a pilot that can be applied to other industries as the need emerges.

# Pillar 3 Recommendations

**3.1. Support industries and employers to be proactive in preparing their businesses and workforces for the impacts of the Fourth Industrial Revolution.**

## **Opportunities to explore:**

- » Deliver information around how to prepare for jobs of the future;
- » Connect industries and employers with tools and resources to support workforce planning;
- » Use the framework and learnings from the Queensland Future Skills Partnership to develop regionally focused bodies to drive workforce transition within key industries across the region;
- » Identify business and community leaders to act as future skills change champions.

**3.2. Provide access to mechanisms to support transitioning workforces to upskill into new job tasks and roles.**

## **Opportunities to explore:**

- » Equip industries and employers to provide personalised job pathway and skill development support for roles at risk, to remain employed into the future;
- » Develop a coordinated approach to support transitioning workforces, including those still engaged in employment, with customised career pathway and skill development plans for those individuals who are not able to access this support through current employment;
- » Increase micro-credentialing and short course offerings to ensure workforces transition;
- » Prepare people to transition from jobs at risk through advocating for government to apply similar initiatives to those being delivered under the JobMaker Plan – Growing Australia’s Skilled Workforce response to COVID-19.

**3.3. Develop cross-industry skilling pathways into projected growth industries.**

## **Opportunities to explore:**

- » Develop a cross-industry pilot project to identify and create pathway plans to support Mining workforces to upskill, reskill and transition into the Construction sector;
- » Facilitate access to tools and resources that identify existing workforce skill levels and gaps to transition into targeted cross-industry work roles;
- » Secure in-region access to training courses that support cross-industry workforce transitions;
- » Extend the cross-industry pilot model to other industries.

# Pillar 4

## Respond to workforce growth areas and industry needs of the future.

The key workforce growth opportunities within the region are expected to be in traditional industries, including Construction, Health Care and Social Assistance and Agriculture, with a specific growth area identified within Aquaculture.

The region will also see significant growth in a range of new ICT and data-related roles, which it will need to prepare for in order to ensure that these workforce opportunities remain available within the region and do not become susceptible to remote serviceability.

However, it must be noted that it is difficult to accurately predict the impacts of emerging industries such as bio-futures and renewable energy because, quite simply, these industries are too new to the region to provide valid data inputs.





Agriculture is experiencing ongoing challenges in attracting and retaining workforces, including challenges around fulfilling seasonal roles, which is likely to continue to increase with projected workforce growth within the industry. This issue will be further perpetuated by increased skill needs as the industry is impacted by the accelerated adoption of technology, regulation and other economic impacts into the future.

Jobs Queensland is currently embarking on a statewide workforce plan for the Agricultural sector, which will provide further support to address these issues. At a regional level, the industry expressed interest in exploring skilling pathways that increase exposure to the variety of roles available within Agriculture and develop agile skillsets that will lead to secure, consistent and interesting job roles. With the right resourcing, there is real opportunity to develop a coordinated and incentivised industry taster model as a way to immerse individuals within the Agricultural industry, better target career opportunities that align with individual interests, and develop foundational skill sets that will enable them to continue their career within the Agriculture sector once they have completed the taster program. Other models that were discussed include rotational work experience, seasonal workforce rotations, coordinated gap years within or across different industries and cross-industry basic skilling packages.

As a targeted focus area within Agriculture, the Aquaculture sector, specifically focusing on prawn farming, has been

identified as a significant workforce growth area within the region. Aquaculture has identified priorities in securing access to in-region skill development opportunities and implementing attraction and retention strategies to fulfil future workforce needs. There is regional interest in replicating workforce attraction strategies similar to those used in the industry within Tasmania, including engaging dedicated workforce development personnel to promote Aquaculture job options in schools. Aquaculture will benefit from some of the broader regional recommendations identified under Pillar 2, and will also benefit from further support to develop a better understanding of the sector needs within the region.

Generally, the Health Care and Social Assistance and Retail industries will benefit from the broader regional recommendations identified in Pillars 1 and 2 to address emerging skills needs and gaps in future workforces. In the face of emerging trends in consumerism and rising expectations in service delivery, human facing roles across Retail, Health Care and Social Assistance and all other workforce roles which involve managing customer relationships will benefit from access to high quality customer experience training within the region. Therefore, the pursuit of regional opportunities to develop skills in customer experience is certainly a relevant focus area in preparing workforces for the future.



# Pillar 4 Recommendations

**4.1. Develop education and training opportunities that create career pathways into key growth jobs in ICT and data related roles.**

**Opportunities to explore:**

- » Provide vocational and tertiary education in region for emerging ICT and data roles;
- » Build interest in ICT and data job pathways in high school students;
- » Deliver training opportunities that create 'bridging' roles that combine industry and ICT knowledge and skills.

**4.2. Increase exposure to job roles within the Agriculture sector.**

**Opportunities to explore:**

- » Explore models that develop foundation skillsets, while also exposing participants to a range of job roles within the Agriculture sector;
- » Facilitate strategic leadership to identify the seasonal requirements of the Agriculture industry and develop rotational employment models for regional workforce retention.

**4.3. Prioritise skill development pathways into the growing Aquaculture sector.**

**Opportunities to explore:**

- » Undertake research and data collection of projected workforce growth in Aquaculture to secure training course delivery within the region;
- » Develop regional workforce attraction strategies for Aquaculture;
- » Increase collaboration between the Aquaculture industry and training providers to deliver training that is relevant and effective;
- » Develop course content that is relevant and effective in developing the skills required within Aquaculture workforces, through strengthening collaborative relationships between the Aquaculture industry and training providers;
- » Develop regional workforce plans for Aquaculture.



# Pillar 4 Recommendations

4.4. Prepare the Construction industry to be responsive to emerging workforce needs.

**Opportunities to explore:**

- » Increase the understanding of job growth areas within the Construction industry to inform strategies to address workforce needs;
- » Increase opportunities to develop skills in using emerging workplace technologies;
- » Support strategies to address emerging skills needs within the local Construction industry.

4.5. Increase customer experience skillsets across all service workforces within the region.

**Opportunities to explore:**

- » Promote the importance of customer experience skills for all jobs that deliver products or services within the region;
- » Identify certified customer experience training that will increase the customer experience skills within the region;
- » Advocate for the delivery of affordable and accessible customer experience training within the region.

4.6. Develop regional skillsets to adapt to augmentation, support automation (service hubs, etc.) and attract remote working opportunities to the region.

**Opportunities to explore:**

- » Participate in opportunities to develop skillsets in automation, augmentation and other emerging technologies;
- » Advocate for opportunities to pilot automation, augmentation and other technology skillset training within the region;
- » Strategically position the region to benefit from remote workforce and remote operating centre opportunities.







# Next Steps

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The *Mackay Regional Jobs Committee* project, along with the *Mackay Isaac Whitsunday Future Employment Study*, details a range of forward thinking recommendations that will require strong strategic leadership in order to influence and drive the required changes to ensure that the workforces within the region remain adaptable, resilient and employable in the face of change. GW3 proposes (dependent upon further engagement) the standing up of a Future Skills Leadership Group (or similar) to take the lead in developing and promoting strategies to progress the recommendations within the *Mackay Isaac Whitsunday Future Employment Study* and the *Greater Whitsunday Future Skills Roadmap*.

The Future Skills Leadership Group will need to consist of high level stakeholders representing the key industries across Greater Whitsunday in order to drive awareness of the actions critical to preparing our region for the future of work. GW3 will provide the backbone support for the activities of the Group and will rely on the ongoing input from the Department of Employment, Small Business and Training and other state agencies.

# Greater Whitsunday Future Skills Roadmap

Vision: A regional workforce across traditional and emerging industries that is skilled and prepared for the jobs of 2030

## Pillar 1

Equip regional workforces with the foundation skills required to effectively participate in jobs impacted by the Fourth Industrial Revolution.

1.1. Advocate to Education Queensland regarding the education focused priorities identified by the *Mackay Regional Jobs Committee*.

1.2. Incorporate enterprise and core skills into career entry level training such as apprenticeships, traineeships and vocational work placements by working with key industry groups, government and training bodies.

1.3. Build retention in employment and employment transition pathways by working with key industry groups and government, and training.

1.4. Upskill employers and managers in enterprise skills that will enable them to manage change, create organisational resilience and foster enterprise skills within their own employees.

## Pillar 2

Establish in-region skills development opportunities which align to emerging future workforce opportunities.

2.1. Develop and implement strategies to retain and attract regional residents into key workforce growth areas.

2.2. Provide new opportunities in the region to address emerging skills needs and gaps.

2.3. Align training opportunities within the region to industry needs and standards.

## Pillar 3

Prepare transitioning workforces impacted by the Fourth Industrial Revolution.

3.1. Support industries and employers to be proactive in preparing their businesses and workforces for the impacts of the Fourth Industrial Revolution.

3.2. Provide access to mechanisms to support transitioning workforces to upskill into new job tasks and roles.

3.3. Develop cross-industry skilling pathways into projected growth industries.

## Pillar 4

Respond to workforce growth areas and industry needs of the future.

4.1. Develop education and training opportunities that create career pathways into key growth jobs in ICT and data related roles.

4.2. Increase exposure to job roles within the Agriculture sector.

4.3. Prioritise skill development pathways into the growing Aquaculture sector.

4.4. Prepare the Construction industry to be responsive to emerging workforce needs.

4.5. Increase customer experience skillsets across all service workforces within the region.

4.6. Develop regional skill-sets to adapt to augmentation, support automation (service hubs, etc.) and attract remote working opportunities to the region.



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