Construction Sector Industry-based Training in the Pacific

Identification of its current state, barriers, and opportunities.

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Definitions

The outcomes of this research are dependent on our working definition of '*construction sector/industry'*. This research conceptualises the 'construction sector/industry' as:

CONSTRUCTION SECTOR/INDUSTRY

The industry concerned with planning, building, and maintaining all types of physical infrastructure and buildings.

This definition does not specify construction trades or occupations. For this project, it is important not to be too specific in the industry definition or to include specialist construction trades as this might exclude relevant skills. This is because, in the Pacific, it is common for countries to have large informal workforces (International Labour Organisation, 2018), particularly in the construction sector (Asian Development Bank, 2008). These informal workforces produce workers whose skills cross between or within traditional trades or occupations. This broad definition reduces the likelihood that we will exclude any relevant construction skills.

This definition also excludes support services to the industry such as the supply of building materials or corporate activities as these are out of scope.

Table 1 below summarises the other working definitions that we are using for this project. These are informed by international conventions and our experiences working in the Pacific.

Table 1: Working definitions of key terms used within this project.

Term	Definition
Apprenticeship	A **Work-based Learning** programme which combines formal and workplace learning to develop occupational competence over the training/apprenticeship period defined by a training contract with an employer.
Alternance Training	A method of training where the learner alternates between defined periods exclusively in the workplace and exclusively in an education institution throughout the training programme.

Apprenticeship Framework	Comprehensive description of the competence, qualification, and assessment requirements for an **apprenticeship.**
Attachment	The employer-based component of an institutional learning programme.
Blended Learning	A **formal learning** programme which combines **classroom learning** with distance and/or online learning.
Classroom Learning	Setting for **formal learning** with learners and teachers in the same physical learning environment.
Competence	The consistent application of knowledge and skill to the standard of performance required in the workplace.
Construction Sector/Industry	The industry concerned with planning, building, and maintaining all types of physical infrastructure and buildings.
Formal Learning	Learning delivered in a systematic and intentional way to a set of **learning outcomes** created by an instructor and/or an instructional designer.
Formative Assessment	A form of assessment carried out to measure a learner's progress against a set of **learning outcomes.**
Industry Qualifications	Work-based qualifications recognised by industry, combining **formal and informal learning** and assessment components.
Industry Training/Industry-Based Training	A way of training where learners develop competence mostly through the workplace, however, develop some complementary knowledge sets, skills, or attitudes outside of the workplace, often while employed.
Informal Apprenticeship	The system where a trainee learns the skills for a trade or craft in a micro or small enterprise, learning and working side by side with an experienced practitioner.
Informal Learning	Learning delivered through mastering the activities and problems encountered in the workplace and throughout life.
Interns	Learners attached to a workplace as part of a **Work-based Learning** programme which may include **informal, non-formal** and **formal learning** components or a combination of these.

Learning Outcome	The set of measurable criteria defining/describing what a learner will know and be able to do once they have completed a learning activity or programme.
Nonformal Learning	Learning loosely structured around workplace activities and projects typically with broad developmental goals.
On-the-job Training	Learning component of a **Work-based Learning** or **Industry Training programme** which takes place in the workplace.
Provider	An arranger and provider of **Work-based Learning** programmes and qualifications.
Student Internship	A **Work-based Learning programme** for students which combines **formal learning** by providers and **workplace learning** by employers.
Summative Assessment	Formal assessment of learning and/or competence for the purposes of gaining/achieving accreditation.
Traineeship	A formal **Work-based Learning** programme for employees which results in a qualification. Combines formal and workplace learning and assessment.
Workplace	Places where people conduct work on their own account or for an employer. They include any spaces, buildings, equipment, work systems, animals and materials required.
Work-based Learning	Learning which is focused on developing the knowledge and skills required by employers and the labour market in general. Either on-job or off-job.
Workplace Learning	Learning in the workplace for employees and interns, including informal learning and on-job training and development not provided by a tertiary institution.

Abbreviations

Table 2: Abbreviations used throughout the document.

AISC	Australian Industry and Skills Committee
APTC	Australia Pacific Training Coalition
AQF	Australian Qualifications Framework
ASQA	Australian Skills Quality Authority
BCITO	Building and Construction Industry Training Organisation (New Zealand)
CITTI	Cook Islands Tertiary Training Institute
DESE	Department of Education, Skills and Employment (Australia)
EPR	Employment-Population Ratio
EVI	Economic Vulnerability Index
GDP	Gross Domestic Product
GEDSI	Gender Equity, Disability, and Social Inclusion
ICT	Information and Communication Technology
ILO	International Labour Organization
IRB	Industry Representative Body
IRCs	Industry Reference Committees (Australia)
ISAG	Industry Standards Advisory Group (Australia)
ITO	Industry Training Organisation
KIT	Kiribati Institute of Technology
KTC	Kiribati Teachers College
MCILI	Ministry of Commerce, Industry, Labour, and Immigration (Kiribati)
MEHRD	Ministry of Employment and Human Resource Development (Kiribati)
MFAT	New Zealand Ministry of Foreign Affairs and Trade

MTC	Management and Training Corporation Institute
NCVER	National Centre for Vocational Education Research (Australia)
NEET	Not in Employment, Education, or Training
NHS	Niue High School
NQF	National Qualifications Framework
NTTTU	National Trade Testing Training and Certification Unit (Solomon Islands)
NZQA	New Zealand Qualifications Authority
NZQF	New Zealand Qualifications Framework
OECD	Organisation for Economic Co-operation and Development
PATVET	Pacific Association of Technical and Vocational Education and Training
PIC	Pacific Island Country
PPP	Purchasing Power Parity
PQF	Pacific Qualifications Framework
PRIF	Pacific Region Infrastructure Facility
RCC	Recognition of Current Competence
RPL	Recognition of Prior Learning
RTC	Rural Training Centre (Solomon Islands)
RTO	Registered Training Organisation (Australia)
SCG	The Skills Consulting Group Limited, NZ
SDG	Sustainable Development Goals
SfEP	Skills for Employment Programme (Kiribati)
SINU	Solomon Islands National University
SITESA	Solomon Islands Tertiary Education and Skills Authority
SPC	The South Pacific Community

SSOs	Skills Service Organisations (Australia)
STAs	State and Territory Training Authorities (Australia)
TAC	Training and Accreditation Council (Australia)
TAFE	Technical and Further Education (Australia)
TEC	Tertiary Education Commission (New Zealand)
TIHE	Tonga Institute of Higher Education
TIST	Tonga Institute of Science and Technology
TNQAB	Tonga National Qualifications and Accreditation Board
TQF	Tonga Qualifications Framework (Tonga)
TTI	Tupou Tertiary Institute (Tonga)
TVET	Technical and Vocational Education and Training
TVETSSP	TVET Sector Strengthening Programme (Kiribati)
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organisation
USP	University of the South Pacific
VRQA	Victorian Registration and Qualifications Authority (Australia)
WASH	Water, Sanitation, and Hygiene
WB	World Bank
WBL	Work-based Learning
WDC	Workforce Development Council (New Zealand)
WHO	World Health Organisation

EXECUTIVE SUMMARY

Background

The Pacific has a strong and growing need for quality infrastructure to meet the current and future needs of its people. Global and national development partners are looking for increased quality, access, efficiency, sustainability, and resilience in core infrastructure areas. This has translated into ambitious plans to further establish and improve infrastructure in all areas within the Pacific. As the region is generally less wealthy than other parts of the world, international development funding is supporting these activities in a large part.

To deliver on these infrastructure plans and strong need for infrastructure, the Pacific needs skilled workers. To ensure that the Pacific has these skilled workers and can meet the demand for skills over time, the Pacific needs to create or maintain an effective supply of construction skills. Industry training is a mode of learning where competence is developed mostly in the workplace and is one of the most effective skills delivery models for the construction sector. Therefore, this research seeks to understand what construction skills delivery is occurring, how industry training models are presented in the Pacific, and what would be needed to implement construction industry training models in the Pacific.

Methodology

To understand construction industry training in the Pacific, this research focused on six countries which have expressed some degree of interest in industry training and have existing New Zealand investment in education and infrastructure: the Cook Islands, Kiribati, Niue, the Solomon Islands, Tokelau, and Tonga.

The research took an adaptive approach to data collection due to the lack of available data on the subject. The main form of data collection was field research, supported by desk research. A scan and analysis of existing literature identified key themes which informed the design of the primary research tool. Local researchers in each focus country partnered with us to use this tool for semi-structured interviews and focus groups with industry training stakeholders. These included: government coordinators including Ministries of Education and Infrastructure; providers of education

and training; industry representatives and employers; and community and voluntary groups where appropriate.

Themes were analysed through the frame of the research questions. Findings are largely combined to understand common themes; however, it is crucial to interpret these findings in context. Local circumstances change the way that successes and challenges are presented. While our findings show valuable implications for the region, interventions should be designed and delivered in close partnership with local communities and stakeholders.

Findings

Stakeholders identified a strong demand for construction skills. The supply of skills to meet this demand was inadequate, particularly the level of skills required across the construction skills labour market. However, a more comprehensive, and quantitative, assessment of skill demand and supply is needed. The skills and employment monitoring systems required by the labour market are mostly missing.

The Pacific Island countries in scope have few examples of formal industry training in their skills delivery programmes. Most Pacific Island countries' formal skills supply comes from institutional TVET providers rather than workplaces, although, the Solomon Islands is an exception. The Solomon Islands has a loose industry training system formed around national apprenticeships; however, these are not performing to their potential. Many of these countries are also in the early phases of adopting industry training models. They are recognising the potential of workplace learning arrangements through workplace attachments for institution-based programmes and are beginning to create systems for better linking the workplace and institutional learning: industry training systems. For example, the Cook Islands is trialling apprenticeships, though not in the construction sector, and Tonga has established a system to create national industry-based qualifications, though construction qualifications have not yet been developed.

The main shared barriers to establishing formal industry training models within the focus countries were limited capacity; coordination and engagement; and regulation and quality standards. These barriers present in different ways depending on the type of industry training system and local context.

Another of the biggest challenges across the focus countries remains geography; it is difficult to reach remote learner groups. Some training providers, such as those in the Cook Islands and Kiribati, are working to reduce these barriers in off-job learning, but the landscape of the Pacific continues to be a challenge for remote learner groups.

There is strong support for the inclusion of vulnerable and marginalised learner groups in work-based learning and industry training, however, significant progress has yet to be made. There are pockets of success: PICs with donor supported programmes often see success as these programmes tend to have inclusive priorities and targets, and some advocacy groups and representative organisations are making good progress.

There were mixed attitudes towards the inclusion of individuals with severe physical disabilities or cognitive impairments due to the hazardous nature of many construction trades. Some stakeholders reported not understanding the needs of diverse learner groups, however, the overall response to inclusive values were positive. For example, there were generally positive attitudes toward the inclusion of women in education and construction.

Three types of training systems emerged following an analysis of the local systems:

- **Emerging Industry Training Systems**
  - Countries with emerging formal industry training systems; they lack the coordinated policy and regulation which would allow them to thrive.
- **Provider-led Training Systems**
  - Countries dominated by institutional WBL rather than industry training; workplace learning takes place, but industry do not lead the design of skills frameworks or the delivery of training.
- **Adaptive and Informal Training Systems**
  - Countries with rudimentary formal WBL systems and limited availability of formal training; training is generally limited to secondary school level and is reliant on the informal sector for industry skills development.

The key factors that determined these categorisations were:

1. The availability of resources for development.
2. The status and capacity of Industry Training Systems; and
3. The approach to skills formation.

The three types of training systems were found to have similar, but distinct needs for the development of effective industry training models.

Emerging industry training systems have the potential to develop successful industry training models with the structure and policy direction mostly in place. Greater resources and labour market size also mean that local training systems may be more sustainable in these types of systems than other PICs. Given these factors, a local and integrated model of industry training, such as that described in the 'Models of Industry Training' section, is likely to be achievable in this context. This would involve strengthening the institutions and supports that are in place and addressing other development priorities from Table 7. These training systems have the potential to provide effective examples for less developed training systems and to serve as regional supports, if needed, to PICs with fewer resources.

Provider-led training systems can extend their focused and flexible off-job systems to integrate with on-job learning provision. A narrow base of formal providers in these countries requires flexibility in their delivery to meet training needs, however, capacity is frequently stretched. These providers are yet to take full advantage of the training capacity that employers in their countries could provide using industry training models. Centralised industry training may be effective in these contexts with providers using their educational expertise to facilitate and guide employer engagement. In these systems, particularly because the main providers are government operated, there is the potential for key education providers to extend into coordination roles that drive demand-side training: industry training.

With moderate labour market size, there is potential for local industry training to be sustainable. It is possible that regional integration will be required for some features of the training system to achieve the efficiencies needed to sustain programmes over time.

Adaptive and informal training systems can create effective industry training but must establish their capability and build flexibility into their skills delivery system. As there are few instances of formal WBL delivery in these training systems and little resource available to establish these, flexibility is key to successful implementation of industry training models. Regional

approaches to skills development may be necessary to overcome barriers due to scale however local capacity will be needed to ensure local relevance and coordination of training. The systematic Identification of skills demands will be critical to understanding whether local labour markets can support training over the long term. It is likely that flexible, lifelong-learning approaches to industry training may provide better opportunities for skills development and recognition as training opportunities may take place over more years than a programme would typically require. Modular industry training programmes and qualifications that build on/use scalable types of learning, such as blended learning, may be useful in these settings.

To develop successful industry training models, all three types of training systems need to strengthen their policy, regulation, and workforce development functions. These functions are critical to the efficiency, sustainability, and effectiveness of delivering industry training. Currently, gaps exist across all types of training systems in these areas to different levels. There is an opportunity to consider regional approaches when strengthening these functions, particularly in areas such as:

- The coordination and sharing of training opportunities and the support of industry training infrastructure and capability.
- Skills framework development and coordination to meet local needs but provide opportunities for regional skills development and labour mobility.
- Quality assurance of delivery and participation, with a focus on recognising training provider flexibility and mobility within the region.
- Regional skills planning that supports both regional and local decision making.

There is a potential to apply industry training in the Pacific to address the skills supply challenges that currently exist in the construction sector. Implementation plans need to address local context but also the regional implications of training. Many PICs have strong foundations from which to build from. There is a strong interest from all types of stakeholders in applying modern WBL and industry training systems in the Pacific construction sector, and some initiatives are underway s that will contribute to the successful implementation of industry training.

The identification of success factors in this research may provide a useful starting point for stakeholders to evaluate their own industry training systems in more depth and identify actions to take. However, to see the best results, the approach used to establish or strengthen industry training models in the Pacific needs to be sensitive to unique local contexts, to value the involvement of local stakeholders, and to work to the strengths and capabilities of current systems.

INTRODUCTION

Purpose

This document is the final report in the NZ Ministry of Foreign Affairs and Trade (MFAT) commissioned project '*Construction Sector Industry Based Training in the Pacific Research'*, carried out by the Skills Consulting Group (SCG). Its purpose is to answer four research questions about the status and potential of industry-based training in six South Pacific developing nations.

This report and accompanying communication products will inform investment, programming, and policy decisions for MFAT and Pacific stakeholders of industry training including government. Other development partners and researchers may also have interests in the findings.

Scope

The subject of this research is Industry Training in the Pacific Construction Sector with a focus on six nations in the region: the Cook Islands, Solomon Islands, Kiribati, Tonga, Tokelau, and Niue. These countries were selected as they have indicated interest in industry training models and are receiving New Zealand investment in education and infrastructure. Information gathered from these countries will be compared with other countries in the region where appropriate. The intention of this report is to use findings from these countries to understand how industry training models may be established and delivered in a Pacific context.

A key focus of the work is exploring issues and trends around the inclusion of disadvantaged and marginalised groups, including women, individuals with disabilities, and remote or rural learners, among others.

Background

Skills development is of great concern to all Pacific Island countries (PICs). High population growth has resulted in roughly half of the region's population being below age 23 (Pacific Community Statistics for Development Division, 2021). The challenges arising from this are familiar across the developing world (United Nations Population Fund, 2011) with some estimates suggesting that the increased number of young people will be one of the largest challenges to development in the Pacific in the future as it places pressure on local economies, labour markets, social systems, and infrastructure (Wilson, 2020).

Though this is a challenge, the increased number of young people also provides an opportunity if used effectively. A young population, well trained and educated, is the primary asset of a developing country, particularly when the country lacks natural resources or established industries. When combined with the generally declining fertility rates in the Pacific (The World Bank, 2021), this younger population can become a key economic force for these countries because they increase the ratio of working age to dependent population (Lee & Mason, 2006). This can deliver longstanding benefits for the Pacific but only if socioeconomic policy supports it. Enough economic opportunities need to be available and the young workers need to have the skills to take advantage of them (United Nations Conference on Trade and Development, 2021).

One industry, the construction industry, is ready to see employment growth in the Pacific. There is a large infrastructure gap in the Pacific (Rajasingham, 2017) and as Pacific Island countries continue to develop and their populations grow, they will require significant investment in their infrastructure to meet their growing economic and social needs (Asian Development Bank, 2017). This infrastructure is also required to support climate change resilience and economic empowerment. There is a huge need to improve and deliver new infrastructure throughout the Pacific with significant investments being made by local and international governments to accomplish this (RDI Network, 2020). This infrastructure demand and investment brings a supply of quality construction employment opportunities to the Pacific.

The Pacific needs a skilled construction workforce to effectively deliver these infrastructure projects. Developing a healthy local construction services sector and labour market is therefore a priority. Previous research has found significant gaps between the demand for construction skills and supply of construction skills throughout the Pacific (Asian Development Bank, 2008). Many factors may be influencing this gap such as migration; insufficient or inadequate skills training; or low attractiveness and government support for vocational skills training. It is clear however, that PICs need to develop the size and skills of their labour markets to meet industry demand and make the most of these growth opportunities.

Industry Training is learning that occurs mostly in the workplace but is enhanced by off-the-job learning. It is one of the most effective ways to produce a skilled and industry relevant workforce because learning centres around the workplace with real on-the-job experience and skills development. Learning experiences are productive and efficient with industry relevant results (Organisation for Economic Cooperation and Development, 2010). Global agencies such as the United Nations Education, Scientific and Cultural Organisation (UNESCO) recognise the potential of industry relevant learning as a way to address many of the world's most important economic, educational, and social goals (United Nations Education, Scientific and Cultural Organisation, 2015). Effective industry training connects learners with industry and employment and creates effective, industry-aligned workforces (Organisation for Economic Cooperation and Development, 2010).

Most vocational learning in the Pacific is currently delivered within education institutions rather than workplaces. Some countries have implemented industry training models such as apprenticeships,

but these are experiencing challenges (Asian Development Bank, 2008). There are also no clear moves towards systematised Industry Training in the Pacific construction sector. Current methods of vocational learning in the Pacific are producing gaps between graduate skills and industry needs. This has reduced the uptake of formal industry-related qualifications, including in some construction occupations (Asian Development Bank, 2008).

Research is needed to understand how industry training could be used effectively in the Pacific. Given the potential, understanding how it's currently implemented and any barriers and opportunities for its effectiveness is a priority. The construction sector is a useful example to frame this understanding because it includes a set of traditional trades that are understood around the world and used in different ways throughout all Pacific Island countries. Insights in the construction sector will also be relevant to the skills development needed for the significant infrastructure growth underway in the Pacific.

Research Questions

1. What models of industry-based training are currently operating in:
    - The Pacific,
    - Similar development contexts; and
    - New Zealand and Australia?

2. What are the success factors for industry-based training? What supporting environment or architecture is needed to enable effective delivery of industry-based training in a Pacific context?

3. What barriers exist for Pacific businesses to participate in industry-based training, with a focus on the construction sector?

4. What opportunities exist for implementing industry-based training model/s in the construction sector in the Pacific?
    - What demand and supply exists for skilled and semi-skilled construction workers in the Pacific?
    - How do the six focus nations in the Pacific compare against the success factors identified in Research Question 2.
    - What might be needed to create the necessary enabling environment for industry-based training models to be feasible?
    - Are there benefits to regional or multi-country approaches to this?

Methodology Statement

Below is a brief statement regarding the research methodology; a detailed explanation of the methodology is available in Appendix 15.

This research focused on six countries which have expressed some degree of interest in industry training and have existing New Zealand investment in education and infrastructure: the Cook Islands, Kiribati, Niue, the Solomon Islands, Tokelau, and Tonga.

The research took an adaptive approach to data collection due to the lack of available data on the subject. The main form of data collection was field research, supported by desk research. A scan and analysis of existing literature identified key themes which informed the design of the primary research tool. Local researchers in each focus country partnered with us to use this tool for semi-structured interviews and focus groups with industry training stakeholders. These included:

- Government representatives.
    - Ministries responsible for Education and Training; Labour, Employment, and Human Resource Development; Gender and Inclusivity; and Infrastructure and Sustainable Development were commonly identified as key stakeholders to this research.
- Education and Training Providers.
    - Local Education and Training Providers were essential to understanding the skills development systems, particularly the formal aspects of these systems.
- Employers and Industry Representatives.
    - Employers are fundamental to industry training models as the dominant location of skills development in this training mode. We sought private and public employer participation wherever possible in this research.
- Community and Voluntary Organisations.
    - In many instances, community and voluntary organisations were relevant to understanding the skills development systems. Being involved as either informal providers of learning and training or as advocates for particular groups and community development strategies.

Themes from the research were analysed through the frame of the research questions. Findings are largely combined to understand common themes; however, it is crucial to interpret these findings in context. Local circumstances change the way that successes and challenges are presented. National context is presented in the appendices where appropriate. While our findings show valuable implications for the region, interventions should be designed and delivered in close partnership with local communities and stakeholders.

STATEMENT OF THE PROBLEM

The Pacific Landscape

Geography

The Pacific region is a diverse and unique area of the world consisting of many languages, cultures, and natural diversity. The region is often categorised into three broad areas: Melanesia, Micronesia, and Polynesia. Though these categorisations have been challenged as being limiting and simplified when referring to cultural groups (D'Arcy, 2003), they are a widely used geographical classification for countries in the Pacific.

The Pacific Ocean contains approximately one third of the world's surface area (Morgan, 2021) and there are over 30,000 islands within it (Eileen L. Shea, 2001). There are high, volcanic islands, typically in Melanesia, and low, coral islands, including atolls, which dominate the Micronesia and Polynesia sub-regions. Australia, New Zealand, and New Guinea are continental islands (National Geographic Society, 2012). Many states in the region are vulnerable to changing climate conditions and its consequences including severe weather events; sea level rise; food and water insecurity; and a loss of habitats and biodiversity (Secretariat of the Pacific Regional Environment Programme, 2008). The lower islands are much more vulnerable to many of these (Secretariat of the Pacific Regional Environment Programme, 2008). Many countries in the region are formed from groups of these islands; with some spread over large areas, such as the Republic of Kiribati. It is one of the most geographically dispersed countries in the world, spread out over 3.5 million km^2 of the ocean (United Nations, 2017).

This geographic distance within and between countries creates challenges for local communities. Transport costs are high (United Nations Population Fund, 2014) and these drive up the costs of production. This limits the amount of investment within the Pacific and the integration with global markets, as is the case with most small island developing states (OECD, 2018). Figure 1 below shows the relationship between the average distance from global markets and population size for countries in the Pacific against other countries. This shows that Pacific countries, shown in dark blue, are some of the most geographically, and economically, isolated countries in the world.

Figure 1: Pacific Island Countries Population and Isolation compared with other countries and Caribbean developing island states.
Source: Pacific Possible: Long-term Economic Opportunities and Challenges for Pacific Island Countries. (The World Bank, 2017)

The isolation also means that connecting people, goods, and services across the region can be a logistical challenge (Asian Development Bank, 2017). In the case of Tokelau for example, the only means of access to the country is a fortnightly boat from Samoa (Government of Tokelau, 2021), and then travel between atolls is limited. Creating a sustainable transport system between and within Pacific Island countries has been seen as a valuable tool to unlocking the significant human capital that exists within the region (Asian Development Bank, 2017). Better transport within the region would enable better access to markets and opportunities for development.

This relative isolation is not the only geographical challenge. Land size, as well as the qualities of the land, present challenges to the Pacific as well. Several Pacific Island countries such as Fiji, Papua New Guinea, and the Solomon Islands have relatively large land areas that are rich in natural resources. As a result, these countries have become relatively strong exporters of goods (Hezel, 2012). Many Pacific Island countries are smaller in land size; have narrow production and resource bases; and, therefore, limited opportunities to diversify their economies (Secretariat of the Pacific Community, 2008).

Pacific Island countries with small land sizes do not have the same advantages of economic diversification, economies of scale, or the benefits of employers being located near each other. Even with the richness and potential benefits of the Pacific Ocean (see (UN Environment, n.d.)), many Pacific Island countries have undiversified economies and depend on imports (The World Bank, 2017). Small countries in the region are more likely to invest in economic niches to overcome this barrier (Asian Development Bank, 2016), however, this increases economic risk through lack of diversification. Global and Pacific agencies recognise the importance of regional cooperation to unlock economic opportunities in the Pacific for these reasons, particularly for smaller countries (The World Bank, 2017).

It is important to note that the more extreme the geographic challenges – remoteness, isolation, and land size – the more severe the economic constraints will be (The World Bank, 2017).

Figure 2: Countries of the South Pacific.

Source: United Nations Pacific Strategy 2018-2022: A multi-country sustainable development framework in the Pacific region. United Nations in the Pacific, 2017.

Demography

Pacific Island countries often have traditional methods of governance and leadership stemming from traditional and indigenous ways of life that influence social and power dynamics. These methods may also influence the use of traditional processes in the management of local and national affairs such as land use, legal affairs, cultural practices, and language (Pacific Community, 2020). These methods of governance cross local to national levels and are sometimes combined with more modern governance methods. The region is comprised of a mixture of independent, dependent, and associated states as a result of long colonial and post-colonial histories (Eileen L. Shea, 2001).

Many Pacific Island countries also have small government administrations and, therefore, may have capacity development issues at both national and sub-national levels (Pacific Region Infrastructure Facility, 2021).

Regional comparisons are complicated by the diverse cultures in the region. Over 1,300 unique languages are estimated to be spoken through the region (Pacific Peoples Partnership, 2021), reflecting the breadth of cultural differences between Pacific Island countries. Each country's natural environment; relative isolation; chronology of settlement; traditional practices and social organisation; European contact; post-colonial governance systems; and development pressures create unique contexts (Anita Smith, 2007). For these reasons, any statements that relate to multiple groups within the region should be made with care.

Spirituality and religion are also important to consider in a Pacific context due to their prevalence and impact on societies. Christianity is the most widespread religion through the region, having significant influence over Pacific communities (Pacific Community, 2020). In a skills development context, there are many faith-based education providers within the region. In Tonga for instance, a large proportion of education institutions are operated by different religious groups (Australian Council for Educational Research and Scope Global, 2014).

While cultural contexts are diverse and, in many cases, unique, there are markers of a shared regional identity because of both the shared histories of Pacific societies and the uniqueness of the region (Anita Smith, 2007).

National population numbers in the Pacific vary but are low when compared with other regions of the world (United Nations Population Fund, 2014). Generally, continental islands to the west have higher populations than the lower-lying islands in the east due to having larger land areas to populate. However, Table 37 in Appendix 13 shows that some smaller countries by land area, such as Tuvalu and Nauru, have disproportionately high population densities, which increases their susceptibility to overcrowding and lack of resources. Appendix 1 shows population pyramids for our focus countries including projections to 2050.

Populations in Pacific countries are relatively young with roughly half of the population under the age of 23 (Wilson, 2020). High fertility rates are driving these numbers (United Nations Population Fund, 2014). There is great potential for economic growth because of this, although significant migration from smaller Pacific nations to larger Pacific nations threatens to diminish this potential (International Labour Organisation, 2020).

Migration has a significant impact on the growth and distribution of populations in the Pacific (United Nations Population Fund, 2014). In the Pacific, migration rates are relatively high compared to population size, compared with other regions of the world, though some countries in the Pacific have persistently low labour mobility (The World Bank, 2017). Australia and New Zealand are the most common external destinations for Pacific migrants (United Nations Population Division, 2020). This is likely because of their relative proximity; immigration relationships and arrangements with the

Pacific; and strong employment and wage opportunities. North America and Europe are the second most common destinations for Pacific migrants while migration within Oceania, excluding Australia and New Zealand, is the third most common destination (United Nations Population Division, 2020). Migration arrangements are both permanent or long-term, and temporary through seasonal worker schemes, fixed-term training arrangements, among others. Migration slows the overall population growth throughout the Pacific.

Migration also has significant benefits for many Pacific Island countries. Increasing the labour mobility in the region through migration has the potential to benefit workers and their families, the countries they come from, and the countries they work in (Curtain, Dornan, Doyle, & Howes, 2017). A World Bank estimate suggests that expanding labour mobility opportunities could generate an additional net income of $13 billion USD for approximately 240,000 permanent migrants by 2040 (The World Bank, 2017). The money that migrants remit home to their families makes up significant proportions of the economies of some Pacific Island countries (The World Bank, 2021). However, migration also reduces the supply of skills in these countries, particularly within the skilled labour forces (International Labour Organisation, 2020). This phenomenon, known as Brain Drain, is a concern to Pacific Island countries, particularly smaller countries (Curtain, Dornan, Doyle, & Howes, 2017). To get the benefits of migration but ensure that local labour markets still get the skilled workers they need, skills training needs to be increased (Curtain, Dornan, Doyle, & Howes, 2017). This would create a balance between sending skilled workers overseas and developing new skilled workers locally.

There is also an increasing trend of people moving to live in urban centres in many Pacific Island countries. This leads to significant social, political, and demographic changes (Development Studies Network, 2017). Some key challenges from this urban drift are overcrowding and pressure on infrastructure. This is similar to a global trend towards urbanisation (see Figure 3). The increased density of living is a concern for Pacific governments trying to manage and plan for this urbanisation, particularly those in small island developing states (UN Habitat, 2015). Some Pacific communities are also balancing this need to plan for urban centres with the need to increase opportunities and services for rural and remote communities. Several stakeholders from our field research reported a concern that a concentration of resources or attention in urban areas may leave rural areas behind in skills, infrastructure, and community development. Young people are moving to more urban centres for better employment opportunities and, in some cases, to move away from traditional lives and responsibilities (Development Studies Network, 2017).

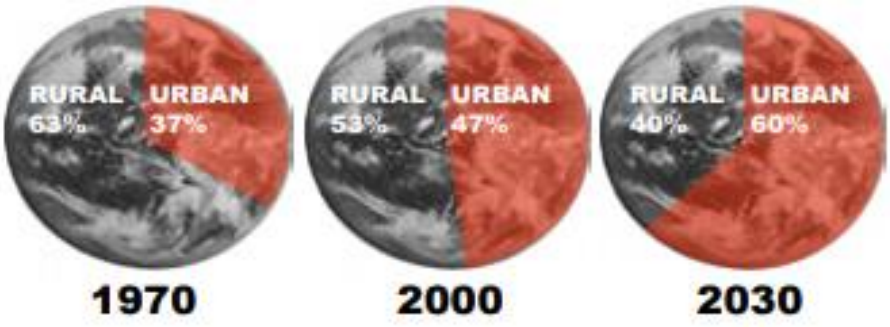

Figure 3: Global population urbanization trend from 1970 to 2030. Source: Urbanization and Climate Change in Small Island Developing States. United Nations Human Settlements Programme, 2015. (UN Habitat, 2015).

Overall, population growth in the Pacific is low, but growth rates of Pacific Island populations vary significantly. (United Nations Population Fund, 2014). For example, the Cook Islands have a declining population growth rate while countries such as Kiribati and the Solomon Islands have relatively high population growth rates (UNESCO, 2015). This is balanced by high, but generally declining, fertility rates in Pacific countries (see Table 37 in Appendix 13) and other factors such as high rates of migration as described above.

Table 37 in Appendix 13 shows these current growth rates against national populations and fertility rates. In areas of low population growth, it can be more difficult to maintain labour supply and economic activity (VanDyke, 2021). Areas with high population growth, have increasing pressure on local environments, particularly marginal land and indigenous forests in the Pacific (Secretariat of the Pacific Community, 2008), but also on local infrastructure and facilities (Clarke, n.d). So, low population growth is a limiting factor for some countries and high population growth is a factor for others.

Education Systems

The education systems within the Pacific are diverse but share many challenges. Pacific communities identified some shared challenges experienced by their education sectors in a United Nations Education, Scientific and Cultural Organisation (UNESCO) Pacific Education for All Review from 2015 (UNESCO, 2015). These challenges permeate through general education as well as work-based education systems in these countries. Those that were identified included:

- Access to, and retention in, education
    - Pre-primary education, secondary education and TVET, remaining 5 to 10 per cent of out-of-school primary school aged children.
- Equity in access to education
    - Children in outer islands and remote areas, children in families with low income, children with disabilities, gender gaps in secondary education.
- Efficiency
    - Children starting school late, high repetition and drop-out rates, low survival rate.
- Quality
    - Low levels of student achievement in literacy and numeracy, untrained teachers, low relevance of curricula, lack of linkages between education and the labour market.
- Education management and data collection
    - Lack of data, low quality data, shortage of skilled staff.
- Funding
    - High reliance on external funding from development partners.
- Coordination
    - Lack of coordination among education providers in sub-sectors of pre-primary education, TVET and non-formal education.

These challenges above are influenced by the other geographic and demographic features, though access to education is particularly sensitive to these. UNESCO notes that physical features such as geography, isolation, and insufficient facilities; social context and cultural norms, particularly around participation of marginalised groups; and socio-economic status of families and communities play a large role in determining fair access to the education systems in the Pacific (UNESCO, 2015).

Assessing these challenges is also difficult due to many Pacific Island countries having difficulties in the management of education data such as poor management of school records, weak data collection processes, poor quality education information software and hardware, lack of capacity and ownership in the education information teams, low priority given to education information by education ministries, and a lack of coordinated and sustained support from development partners (UNESCO, 2015).

Investing in quality education is of particular importance for economically small Pacific countries so that they can increase access for learners and their opportunities for employment (Asian Development Bank, 2019).

Employment

Despite large numbers migrating out of the region, formal employment opportunities for those that stay remain low (The World Bank, 2017). Additionally, 24.7% of employment in the Pacific is classified as vulnerable using the International Labour Organisation (ILO) vulnerability measure that includes individuals who are self-employed and that contribute to family income generating activities (International Labour Organisation, 2019). These jobs are considered at a higher risk of being lost due to changing economic conditions. Table 38 in Appendix 13 details recent unemployment figures for the Pacific. These are varied, with some countries having high unemployment, up to 30%, and others low, approximately 1%. Low unemployment rates in these countries are likely related to relatively small formal economies and widespread informal working arrangements (International Labour Organisation, 2020).

Figure 4 below also shows the employment-population ratios (EPRs) for a selection of Pacific countries. This shows that the Cook Islands, Niue, and Tokelau have relatively high formal employment rates, Tonga has a comparatively average formal employment rate, and Kiribati and the Solomon Islands have comparatively low formal employment rates. Young people in the Pacific are facing particularly high levels of unemployment (ADB and ILO, 2017). In some cases, Tokelau for example, community and government based working arrangements exist that drastically reduce unemployment as working age individuals have the option to work for community groups. Unemployment is also notably more prevalent in outer islands which have less access to economic opportunity (The World Bank, 2017).

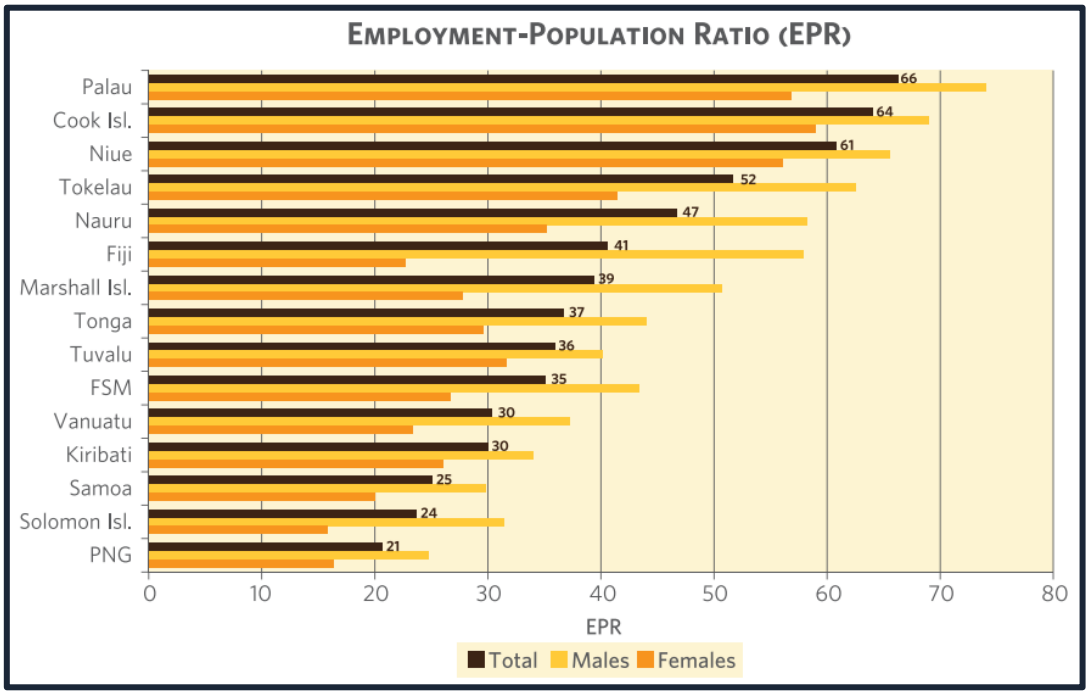

Figure 4: Employment-Population Ratio (EPR) in Pacific Island countries.
Source: Population and Development Profiles: Pacific Island countries. (United Nations Population Fund, 2014)
Employment Population Ratio is calculated as the number of people employed in paid work divided by the total population and multiplied by 100.

The proportion of young people not in employment, education, or training (NEET) is significant in many Pacific Island countries (International Labour Organisation, 2020). These young people may be disengaged with employment and training due to family or community responsibilities, among other things. In this group, the gender imbalance is particularly noticeable in some cases. For example, the Cook Islands, Fiji, and Vanuatu have significantly more young females than young males not in employment, education or training (International Labour Organisation, 2020).

Unemployment has also worsened through the Covid-19 pandemic (International Labour Organisation, 2020), particularly in countries that are highly dependent on international markets. Covid-19 has resulted in serious health impacts in several countries, notably Fiji, however, it has also posed serious challenges for the economies and labour markets throughout the Pacific. The inability to receive visitors from overseas has severely restricted Tourism, a key export sector of many Pacific Island countries, as well as other industries. While the Cook Islands had only a short-lived open border with New Zealand in early 2021, the benefits of this were strongly emphasised by local stakeholders in our field research. The road to economic recovery from the pandemic will depend on the ability to open the Pacific up to international markets again, though this will need to be balanced with health outcomes from the Covid-19 pandemic.

Economy

The geographic and demographic features of the Pacific described above influence the economic vulnerability of Pacific Island countries. The United Nations Economic Vulnerability Index (EVI) is the most comprehensive measure of this (Asian Development Bank, 2019). The EVI assesses vulnerability through several factors that are measured on two scales: Exposure to shocks and Vulnerability to shocks (United Nations, 2021).

- Exposure to shocks – Exposure index
    - population size (size index)
    - remoteness (location index)
    - population in low elevated coastal zone (environment index)
    - concentration of exports and share of primary sector in GDP (economic structure index)
- Vulnerability to shocks – Shock index
    - number of victims of natural disasters and instability of agricultural production (natural shock index)
    - instability of exports of goods and services (trade shock index)

Pacific Island countries are generally rated high on all of these dimensions and are therefore considered highly economically vulnerable. Figure 5 shows the 25 most economically vulnerable countries in the world from a 2018 EVI analysis. Small island developing states, shown in red, are heavily represented in the list along with Pacific countries. Also, four of our six focus countries are represented in the list: Kiribati, the Cook Islands, Tonga, and the Solomon Islands. The Pacific is one of the most economically vulnerable regions in the world. This is further shown by the region's significantly slow progress towards the United Nations Sustainable Development Goals (SDGs) due to external shocks in recent years (Bolesta, 2020).

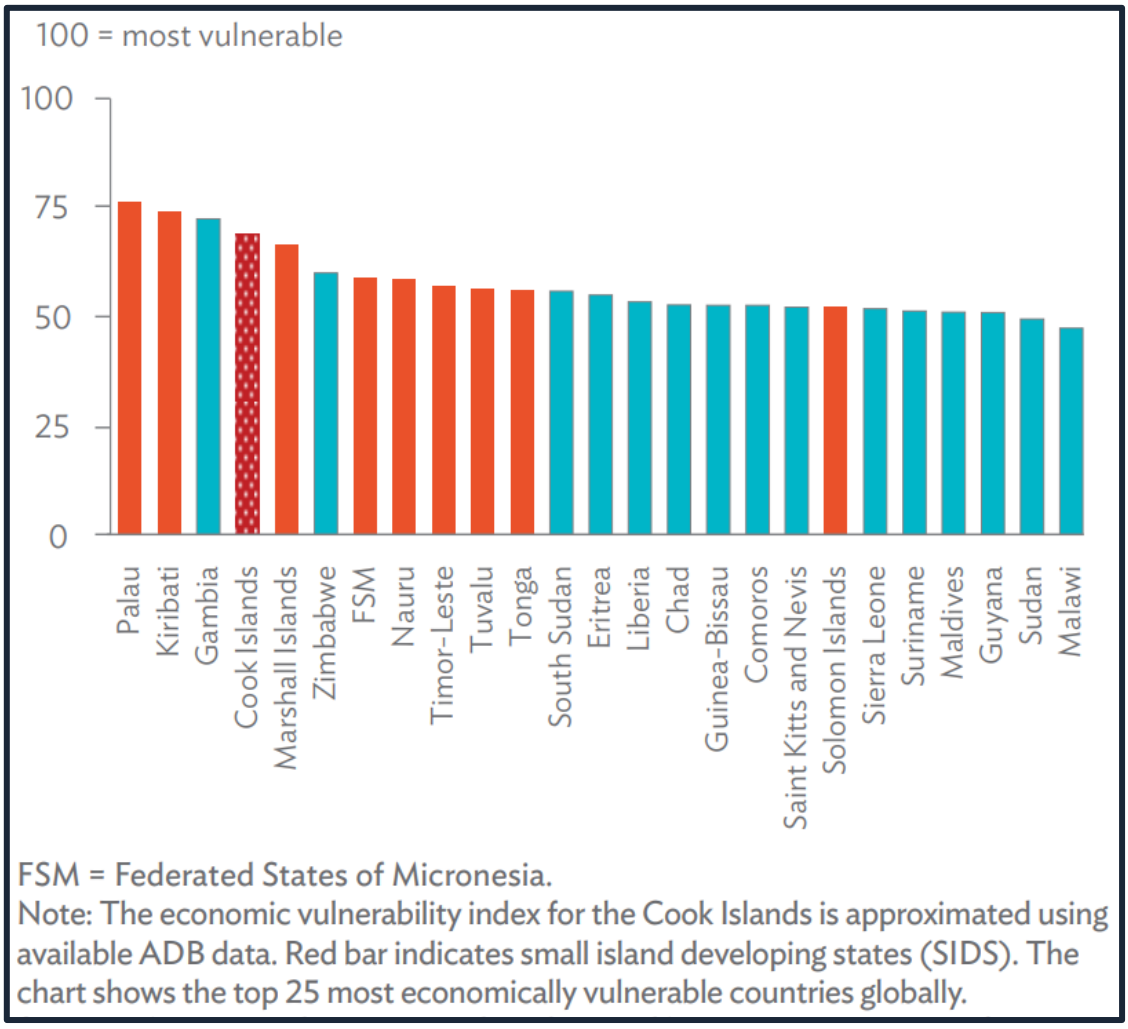

Figure 5: Top 25 most economically vulnerable countries globally in 2018, as assessed by the United Nations Economic Vulnerability Index (EVI).
Source: Pacific Economic Monitor, December 2019. Asian Development Bank and United Nations Department of Economic and Social Affairs. (2019).

More than economic vulnerability, the Pacific region has experienced slow economic growth over a long time (The World Bank, 2017), apart from Papua New Guinea and the Solomon Islands (International Labour Organisation, 2020). Table 38 in Appendix 13 presents some key economic indicators for the Pacific which show that GDP per capita varies throughout the region, however, inequality and hardship are common (International Labour Organisation, 2020).

Many people in the Pacific live in hardship and can't meet their every-day needs. Even a significant proportion who live above the hardship line are vulnerable to it (The World Bank, 2017). Additionally, many Pacific Countries experience relatively high costs of living, partly as a result of the geographic barriers to economic activity described above (Asian Development Bank, 2019).

Subsistence livelihoods – mostly living off self-harvested foods – are a reality across much of the Pacific, with three quarters of the Pacific population living in areas that largely rely on agriculture and fishing for their livelihoods (Pacific Community and the Food and Agriculture Organisation of the United Nations, 2018). Therefore, disruptions to the natural environment in the Pacific, particularly climate change, bring significant risks to livelihoods throughout the Pacific and the economic activity in these areas.

Pacific Island countries typically depend on international sources of income such as aid funding and remittances from family working in other countries, and natural resources such as tourism, fisheries, and forestry (International Labour Organisation, 2020). Pacific economies have been classified in several different ways in the literature, two of which are briefly outlined in Appendix 17.

Several factors emerge from these economic classifications in the Pacific:

- Larger and more resource rich countries in the Pacific have greater potential for economic independence though exports. Service-based exports such as Tourism, the utilisation of the Pacific Ocean, and remittances also have great economic potential.
- Some countries in the Pacific are growing their economies by managing international investment in their countries and the use of their resources.
- Many industries in the Pacific are economically vulnerable and many economies in the Pacific have only have a few key industries, they are not diversified.
- Many countries in the Pacific are dependent on international aid.

A major World Bank analysis (The World Bank, 2017) suggests that the most likely prospects for Pacific development lie in four main areas:

- First, pursuing integration with larger economies and among the Pacific Island countries. This would reduce the economic costs of distance, through increased labour market integration, better transport and communication links, and aligning regulatory frameworks and services.
- Second, pooling the provision of public services across small Pacific Island countries (for example, in telecommunications and competition regulation). This would reduce costs and, at the same time, reduce demands on each country's capacity.
- Third, ensuring that gains from natural resource industries (including tourism) are maximised, and distributing the benefits broadly across the population.
- Fourth, maximizing the benefits from international assistance, recognizing that, in many cases, financial aid and capacity support are likely to be required over the longer term.

The Pacific is a unique region that is facing many challenges. Its geography and culture frame the current Pacific landscape while demographic factors are driving the need for quality employment and economic growth. Economies in the Pacific need to effectively transition to become resilient and sustainable, both economically and environmentally.

Status of the Pacific Construction Labour Market

The points in the section above describe many of the shared factors that have an impact on labour markets in the Pacific, crucially including:

- Geography and relative isolation,
- Environmental vulnerability,
- Varied availability and capability to utilise resources,
- Governance arrangements,
- Varied populations and distributions of these,
- Economic vulnerability and a shallow industry structure; and
- Varied education system effectiveness.

These factors are seen in different levels throughout the Pacific and result in challenges to developing and maintaining sustainable labour markets. According to the International Labour Organisation (International Labour Organisation, 2020), Pacific labour markets generally experience:

- Low labour force participation and varied unemployment rates,
- Concentration of jobs within the services and medium-skill occupations,
- High rates of work that is vulnerable to economic and environmental shocks; and
- High rates of emigration in search of employment.

Keeping these factors in mind, the next few pages describe the potential demand and supply for skills in the Pacific construction sectors within our focus countries. With the lack of quantitative information about skills demand and supply, we are unable to provide robust calculations. In the sections below we draw on qualitative statements from our field research and general information from our desk research to give a picture of skills demand and supply in our focus countries. We included qualitative information from interviews that was reinforced by several stakeholders; however, these statements of skills demand and supply represent their opinions and experience. A more accurate and quantitative study into the skills landscape of the Pacific is needed.

Potential Demand and Supply for Construction Workers

In the context of our discussion of skill demands it is important to understand the differences between unskilled, semi-skilled, and skilled labour. These terms are broad categories of workers by the level of skill they need to apply in their role and are used in many industries. There are no set definitions for these terms, only generally accepted usage. So, we define them in the context of our research as:

- **Unskilled labour**
    - Workers with no relevant skills or qualifications to their occupation and little to no experience in the occupation. In the construction sector, this could refer to labourers.

- **Semi-skilled labour**
    - Workers with some relevant skills to their occupation, perhaps some training or experience, but lacking significant experience in or advanced skills relevant to their occupation. Skills learnt at this level are usually highly transferrable. In the construction sector, this might refer to partially trained apprentices or ‘handypersons’.
- **Skilled labour**
    - Workers who have advanced skills, training, and certification (where relevant) gained through significant training, development, and experience in their occupation. In the construction industry, this might refer to tradespersons such as carpenters, plumbers, electricians, etc.

These broad categories were frequently used in our field research. Most countries in the research described specialised tradespeople and construction graduates from higher education as skilled workers. They described trainees and lower-level vocational education graduates and industry workers like ‘handypersons’ as semi-skilled labour; and those with little to no qualifications or experience in the construction industry were described as unskilled labour.

Skills Demand

The Pacific, overall, is experiencing significant investment in its infrastructure from international governments and development agencies (Pacific Connections and the Research for Development Impact Network, 2020). Infrastructure investment is a priority for Pacific governments to achieve national and global development goals including the United Nations Sustainable Development Goals (SDGs) (United Nations, 2021). Outcomes from this infrastructure investment can be diverse and vital to achieving goals in other areas such as health, education, and the economy (Andrés, Limi, Orfei, & Samad, 2013). Therefore, investments in infrastructure can have high impact for international donors.

The Pacific Infrastructure Performance Indicators 2021 report by the Pacific Region Infrastructure Facility (Pacific Region Infrastructure Facility, 2021) describes the current state of infrastructure in the region, following international funding of infrastructure over many years. While each country has different infrastructure challenges and important progress is being made, overall, the infrastructure challenges that the report outlines are:

- Challenges accessing infrastructure for some rural areas, though significant improvements have been made over recent years.
- Inefficient provision of services, particularly in the energy and Water, Sanitation, and Hygiene (WASH) sectors.
- High service pricing, though there are subsidies for some utilities and some competition in the market for Information and Communication Technology (ICT).
- Safety concerns for some infrastructure areas such as waste management and WASH. Notably pandemic safety concerns for WASH facilities.

Driving these challenges is, primarily, the need to meet infrastructure requirements for growing and increasingly urban populations. Utilities, housing, connectivity, and opportunities for economic empowerment and development are all seeing growing demand (see PRIF infrastructure profiles for national information; Pacific Region Infrastructure Facility, 2021).

Beyond this, possibly the most important infrastructure challenge to the Pacific region is climate change. This is an issue that deeply impacts all countries in the Pacific, though, the lower and smaller islands are disproportionately impacted. Climate change is driving infrastructure challenges in existing areas such as energy, Information Communication Technology (ICT), waste management, transport, and WASH, therefore, it is driving demand for a new area of infrastructure investment: infrastructure resilience.

Not only will current infrastructure need to be adapted and made more efficient in the transition to resilience, but new infrastructure will need to be created (International Labour Organisation, 2020). Significant infrastructure developments in new areas such as sea wall construction and resilient housing will be needed to reduce the negative impacts of climate change and make communities in the Pacific more resilient. While climate change presents risk to the Pacific, implementation of climate adaption measures would see significant job opportunities in the construction sector (The World Bank, 2017).

With low economic growth and, historically, low infrastructure outcomes for levels of GDP (The World Bank, 2006), the Pacific relies heavily on international support to address these challenges and meet its infrastructure needs. These needs are high; the Asian Development Bank estimates that the Pacific will require USD 3.1 billion dollars in infrastructure investment each year until 2030 to meet the challenges above (Asian Development Bank, 2017).

International donors will continue to provide infrastructure investments in the Pacific over the long term. Over recent years, many major infrastructure projects have been completed and many future investments have been announced by the governments of New Zealand, Australia, Japan, and the United States, among others (RDI Network, 2020). The Pacific Region Infrastructure Facility has contributed to the development of many national infrastructure investment plans for Pacific countries, with more on the way (Pacific Region Infrastructure Facility, 2021). A significant schedule/flow of infrastructure investment is outlined in these plans, representing only a small portion of the overall infrastructure projects that are planned for the region.

This international support in the region is a key driver of the demand for construction skills in the Pacific. This flow of work will result in employment opportunities in the region for many years. Importantly though, a more detailed analysis of where these investments are being made is needed to understand the areas of the construction sector where this skills demand will be created.

Currently, there is a lack of quantitative skills monitoring throughout the Pacific. This was partly due to the informal nature of many construction activities in these countries and the limited capacities of some governments to do this

SKILLS DEMAND: ILLUSTRATIVE QUOTES

"Demand is immeasurable, prior to Covid there was a significant shortage of skilled [and] semi-skilled construction workers in all areas, it's even more drastic now." – **Cook Islands**

"[There are] lots of areas and occupations with skill gaps, [I] can't be specific enough [for the question]" – **Kiribati**

"There is a lot of demand. In fact, there is demand for all [construction] trades [in] Niue" – **Niue**

"[The] population size increasing so there is growing demand for skilled work." – **Solomon Islands**

"The current demand for private construction workers is low." – **Tokelau**

"The level of demand for skilled [workers] is high; for semi-skilled, it is still readily available." – **Tonga**

monitoring. Some countries established industry groups to provide advice regarding the demand for qualifications, but our research did not identify any robust workforce planning that assessed skills demand in the construction sector.

Stakeholders in all countries in our research stated that the overall demand for both semi-skilled and skilled construction workers in the Pacific was very large. In some countries, the perspectives of stakeholders were more mixed on this point and in some instances, (see below), demand was small. Overall, however, stakeholders within industry groups, government, and education and training institutions from all countries in our research felt strongly that there was significant demand for both skilled and semi-skilled construction workers in their countries. Their perspectives are summarised for each country are below:

- In the **Cook Islands**, demand was reported to be strong for both skilled and semi-skilled workers in all areas of the construction sector from all types of stakeholders in our field research. Strong demand for construction skills in the Pa Enua (outer islands) was also described; possible differences in skill demands may exist between the northern and southern groups of islands. General construction activity, harbour development, civil projects, and power network expansion are driving demand.

- In **Kiribati**, stakeholders from our field research described a more mixed level of demand for construction skills. We cannot make a clear assessment of the demand for semi-skilled construction workers in Kiribati, but stakeholders consistently described the need for greater skills in the industry. For semi-skilled workers, the demand is less clear and this is a gap in our research.

- In **Niue**, strong demand was indicated for both skilled and semi-skilled workers in the construction sector by all types of stakeholders, particularly government and training providers.

- In the **Solomon Islands**, all stakeholders described a growing demand for skilled workers. We do not have sufficient information to evaluate the demand for semi-skilled workers from our field research. Importantly, it was mentioned that while there was growing demand for skilled work, job opportunities in the construction sector were shrinking. This is leading to problems linking graduates from education institutions to demand.

- In **Tokelau**, demand for private construction activities is very small due to the government-managed construction groups performing nearly all construction activities in the country. A small minority of citizens might choose to hire workers from the government construction groups after-hours to construct private residences, however, there are no private construction companies in Tokelau. For this reason, Tokelau's circumstances are unique in the countries that we focused on in our research. More information is needed regarding the demand for skills within the government working groups.

- In **Tonga**, stakeholders generally agreed that demand for skilled workers was high, however, evidence of the demand for semi-skilled workers shows only moderate demand. One stakeholder noted that there may be an oversupply of semi-skilled construction workers. We do not have sufficient information to accurately assess the demand for semi-skilled workers in Tonga.

Our field research identified that skilled workers tended to be in higher demand than semi-skilled workers, however, there were mixed perspectives on the demands for general workers and specialist skilled workers. Generally, specialists were highly sought after in each country, however, Kiribati stakeholders articulated a need for skilled workers to have a diverse skillset to lessen their exposure to the limited labour market opportunities in the country. Similarly, it was reported by industry stakeholders in the Cook Islands that local workers need a wide range of skills for similar reasons. Workers in smaller labour markets are more likely to develop general skillsets which reduces the quality of their work, while workers in larger labour markets are more likely to specialise. An industry stakeholder from the Solomon Islands also stated that large projects need specialised skills, whereas rural areas need broader/rural skills. More information is needed about the contexts of each country and whether their construction industries require workers with mixed skillsets or specialist workers.

Another point that emerged from our desk research was that while Pacific infrastructure projects are being completed, they are often inadequately maintained. This shows a 'build-neglect-rebuild' mindset (Pacific Region Infrastructure Facility, 2013). Infrastructure investments need to be supported with sufficient maintenance over time to maximise the return on investment and good local outcomes. As the Pacific strengthens this asset management capacity and capabilities, infrastructure maintenance skills will be needed as well as infrastructure construction skills.

Appendix 2 breaks down the labour markets in our focus countries by industry. In some instances, the data is old, however, this still gives useful insights. With relatively slow economic growth and limited opportunities for industrial diversification, the focus countries have not had radical shifts in their labour markets within the periods from the censuses to present.

Skills Supply

The potential economic opportunities from this skills demand will only happen if the Pacific can supply enough skills. Industry training is a valuable model for Pacific governments wanting to increase the skills of their workforces and make the economic gains from this increased demand for infrastructure and skills.

Employer stakeholders in all focus countries, excluding Tokelau, reported some difficulties in finding skilled workers. (Tokelau does not have private employers.) This reinforces earlier work from the ADB suggesting that there are important skills needed throughout the Pacific, particularly in construction (Asian Development Bank, 2008). The supply of skills is falling behind the skills demand.

Also, stakeholders often reported that the graduates of formal education providers don't have the level of skills required by industry. Employers have to provide their own workplace training for employees in addition to the programmes offered by education institutions. This is expensive, time consuming, and risks trained employees leaving and taking jobs with other companies.

In some instances, particularly the Solomon Islands and Tonga, these formal programmes have increased the number of undertrained graduates. Some stakeholders were concerned about many unskilled or semi-skilled workers flooding the market and potentially lowering construction standards.

Also, stakeholders in the Solomon Islands reported challenges in connecting undertrained graduates with jobs. Even with a high demand for skills there was also a lack of job openings. Many graduates wait for job openings instead of establishing their own businesses. A system to track job openings is one solution. Training to set up new businesses may also be valuable. Stakeholders reported that similar challenges exist in other Pacific Island countries, such as connecting the informal workforce to jobs and meeting skills demand in remote locations. There needs to be better links between skills supply and demand. Industry training is a natural solution to this problem with employees learning skills in the workplace that their employer needs rather than in separate institutions.

INFRASTRUCTURE: SKILLS DEVELOPMENT POTENTIAL

Beyond the current skills supply situation of the Pacific that is described in this section, this research needs to acknowledge the enormous skills development potential from the infrastructure planned for the Pacific.

In industry training systems where learning happens mostly in the workplace, economic activity is an opportunity. Investing in infrastructure is not only creating demand for skills but is creating an opportunity for them to be created. This Pacific infrastructure investment could be a core pillar of regional skills supply.

International agencies are yet to tap into this dual potential of their investments, however some innovative programmes such as the German government and ADB Build4Skills initiative are promoting the idea (Asian Development Bank, 2020).

Emigration takes away skilled workers and those with potential, narrowing the skills markets of these countries. A significant number of migrants, particularly from Niue, the Cook Islands, and Tokelau, don't return home for long periods of time. Stakeholders also reported that higher wages and improved economic opportunities are the main reasons for migration. The lack of training and skills development training is also a reason. This leaves fewer skilled workers in local labour markets.

Immigration also affects the supply of skills in the Pacific. Stakeholders in several countries reported that skilled workers were brought from overseas to fill jobs. In some instances, this was much needed. In Tokelau for example, construction companies have recently brought skilled workers from both Samoa and NZ for major projects such as building wharfs/jetties and landing sites for telecommunications cables. The skills they need aren't available locally. In the Solomon Islands however, stakeholders reported overseas contractors taking project opportunities from which the local workers were able to undertake. One key reason for this happening was a lack of labour market monitoring: without monitoring locally available skills (including informally), companies lacked the required local labour market knowledge to employ local people.

Labour mobility – how easily workers can move around - was reported by stakeholders as both a positive for some countries and a negative for others. It is a complicated issue, and the impacts of migration will be unique to each country in the Pacific. Sometimes, receiving large numbers of skilled or unskilled workers puts pressure on local skills training and employment opportunities. Other times, exporting workers provides them with experience that isn't available locally. Providing

options for workers to move can bring significant economic benefits for workers, the countries sending workers, and the countries receiving workers (Curtain, Dornan, Doyle, & Howes, 2017). The key to understanding the impacts of migration on local skills supplies is how effectively a country can replace the skills they are losing or manage the skills that are being brought in. Countries that send more workers than they receive need to ensure that they effectively replace the skills they are losing through skills development activities. Countries that receive more workers than they send need to effectively manage the arrival of these workers to ensure that they fill gaps in skills demand and do not place pressure on the local job market. The Oceania region, excluding Australia and New Zealand, generally sends more workers than it receives (United Nations Population Division, 2020). Therefore, it is more likely that the Pacific Island governments will need to address a net loss of skills rather than a net gain. This opinion was shared in our discussions with stakeholders from all focus countries; many were concerned about the national loss of skilled workers. Pacific Island countries need to balance their capacity to maintain an effective supply of domestic skills with their need to access workers and skills development opportunities regionally and internationally.

National skills supply is also influenced by both short and long-term overseas skills development experiences. Stakeholders reported that employers and governments frequently send selected workers overseas for skills development, expecting them to bring their skills back to the local labour market. This is costly, so this usually occurs when there are few local training opportunities available, or they are not of a good quality. Upskilled workers become pillars of expertise in local organisations and can teach what they know. Stakeholders in the Cook Islands for example reported a strong training relationship with New Zealand; industry organisations in the Cook Islands partner with organisations in New Zealand to develop their staff. Typical destinations for training were reported as New Zealand, Australia, Fiji, and Samoa but this depends on the intended skills development and available programmes.

These arrangements are usually longer-term and more significant investments, though short-term experiences and scholarships exist. Stakeholders from most focus countries reported that short term skills development opportunities are most often brought into the country rather than sending learners overseas. This is achieved by bringing in international trainers for short durations. However, training provided in this way was frequently reported to be for non-accredited training, which reduces the likelihood of formal and national accreditation.

The research identified very little quantitative information regarding skills supply for the construction sector in the Pacific. To gain an indication of the balance between skills demand and supply in our focus countries, stakeholders in our field research were asked to identify areas of skills oversupply and undersupply in their local construction sectors. Table 3 below details the responses from stakeholders. This list is not exhaustive; however, it does highlight some priority areas. A more in-depth analysis of labour market skills is needed to fully understand the state of the construction skills supply in these countries.

Table 3: Undersupplied and Oversupplied skills by country as identified by stakeholders in the field research.

COUNTRY	SKILLS UNDERSUPPLIED	SKILLS OVERSUPPLIED
Cook Islands	• Stakeholders identified undersupply of skills in all areas of construction. • Only about one third of individuals working in trades and trade-related occupations have a qualification	• No oversupplied skills identified.

COUNTRY	SKILLS UNDERSUPPLIED	SKILLS OVERSUPPLIED
	(Government of the Cook Islands, 2021). • There is no quantitative assessment of skills gaps, however, skills shortages are generally considered to be an issue (Government of the Cook Islands, 2021).	
Kiribati	• Most construction sectors report skills gaps. • Higher trade skills in areas such as plumbing and electrical. • Structural engineers and those able to assess the quality of construction. • Architects. • Higher level, Certificate level 3, holders in construction. • Foundation skills such as technical drawing and interpretation.	• Stakeholders made references to the oversupply of 'white-collar' graduates in Kiribati with too few 'blue-collar' and trades graduates. • Lower skilled carpenters.
Niue	• Plumbers. • Qualified builders/carpenters, currently many informal. • Electrical trades. • Painters. • Landscapers. • Heavy diesel mechanics. • Water and Electrical engineers. • Mechanics. • Welders. • Crane operators. • Automotive trades. • Drain laying.	• No oversupplied skills identified.
Solomon Islands	• General shortage of skills in all trades noted. • Skills gaps notable in areas where standards are enforced: carpentry, plumbing, civil construction, among others. • Finishers. • Plumbers. • Welders.	• Carpenters • Too many trainees seen by stakeholders, however, this may be the result of a lack of connection between supply and demand. • Too many graduates, particularly electrical, with insufficient skills.

COUNTRY	SKILLS UNDERSUPPLIED	SKILLS OVERSUPPLIED
	• Architects. • Lower level rural and community maintenance skills such as those required for footpaths and small bridges. • Environmental assessment, preparing specifications, and materials testing. • Geo-technical skills. • Quality assurance of construction works. • Technical skills for civil works. • Labour market study identifies the most needed skills over the next 5 years to include: skilled tradespersons including project managers, engineers, electricians, builders, mechanics, and plumbers. (Ministry of Education and Human Resource Development 2019 annual report).	• Engineers struggle to find work, however, this may be due to lack of connection between supply and demand.
Tokelau	• Stakeholders noted significant skills gaps across the construction groups. • Construction groups include: Building construction group (this group is responsible for both residential, hospital and school building, Government office construction); Water & sanitation; Sea wall construction; Plumbing; Electrical wiring; Repair & Maintenance; and Welding.	• No oversupplied skills identified.
Tonga	• Plumbers. • Finishers and Joiners. • Tilers. • Quantity surveyors. • Site foreman. • Team leaders. • Painters. • Steel Fabricators.	• Slight tendency to have a greater number of carpenters that other trades was reported. Though, this is often seen locally as a starting point from where workers may transition into other trades. • Block layers. • Plasterers. • Unskilled workers.

COUNTRY	SKILLS UNDERSUPPLIED	SKILLS OVERSUPPLIED
		• Some limited evidence from stakeholders to suggest an oversupply of semi-skilled workers.

MODELS OF INDUSTRY TRAINING

Types of Industry Training

Industry Training: A Component of Work-based Learning

Industry training is a subset of a larger concept: Work-based Learning (WBL). WBL can also be referred to and included within concepts such as Technical and Vocational Education and Training (TVET); Vocational Education and Training (VET); Competence-Based Learning and Assessment (CBLA); among others. WBL is learning, focused on developing any or all of the knowledge, skills, behaviours, and competences required by employers and the labour market. This can take place in one, or a combination, of workplace environments. These could be training institutions or blended learning programmes; and self-directed learning environments using projects, simulations, and similar applied learning systems. It can be arranged by both TVET institutions and industry but is normally managed through WBL programmes and qualifications.

WBL has benefits to many stakeholders:

- Individual workers are more employable and can earn more,

INDUSTRY TRAINING

Industry training is an aspect of WBL which is, to a large extent, organised by industry and its representatives. The main method of learning is on-job, with off-job learning delivered by formal TVET institutions added. It is often, though not always, accredited using skills and competence-based assessment such as trade testing.

It is the primary model of WBL in Western Europe (called dual training), some parts of Asia (Korea and Japan), and within Australasia including the apprenticeship and traineeship systems in Aotearoa/New Zealand and Australia. It started from the traditional apprenticeship systems found across the world, modernised to include new technologies and competences. Its main focus is on developing occupational competence.

- Industries and employers see higher productivity from a skilled workforce,
- Training providers receive financial benefits and a boost to their reputation from offering courses that achieve better learner outcomes,
- Governments see improved social outcomes, including lower rates of individuals not in education or employment, workers involved in more varied occupations and stronger labour markets,
- Communities benefit from more reliable and secure incomes, savings, and investment, among other things.

There are four main types of WBL according to the European Training Foundation (ETF) (European Training Foundation, 2014), each with different degrees of workplace contact as shown in Figure 6:

- *WBL where the learner is legally an employee, such as formal apprenticeships, and in some cases alternance training; in some cases, informal apprenticeships may come under this heading;*
- *WBL where the learner is legally a student; these can be called by several names, including traineeships, internships, work placements and cooperative education;*
- *Cases such as simulated firms, training firms, or 'real' firms that are attached to and part of educational institutions – in these instances, the provider of education is partly an education institution and partly an employer; and*
- *Programmes such as work shadowing and work experience, where the main aim is to teach work-readiness (learning about work, time-keeping, personal presentation, etc.) rather than to teach them how to do a particular job or skill.*

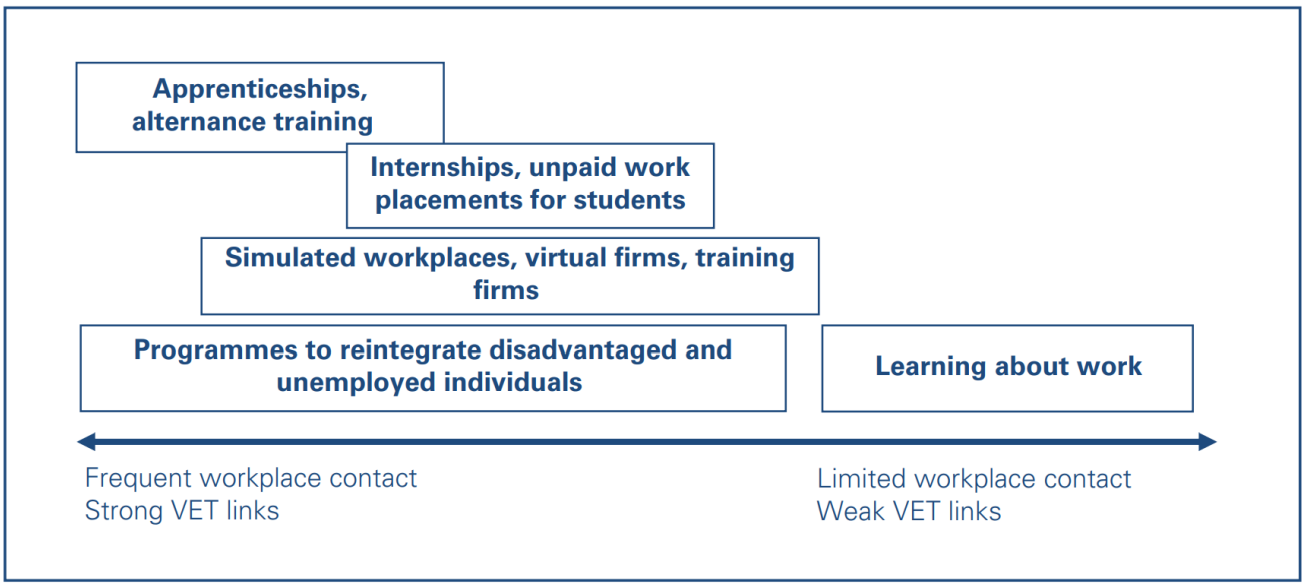

Figure 6: Work-based Learning Arrangements by level of Workplace Engagement.
Source: ETF, 2018, Work-Based Learning: A handbook for policy makers and social partners in ETF partner countries.

Figure 6 shows the levels of workplace contact for each of these types of WBL.

Of these types of WBL, Apprenticeships, Internships/Traineeships, and On-the-Job Training are the most common arrangements recognised by international development agencies such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Labour Organization (ILO), the Organisation for Economic Co-operation and Development (OECD), the United Nations Industrial Development Organization (UNIDO), the World Health Organization (WHO) and the World Bank (WB). (International Labour Organisation, 2017). As apprenticeships are mainly considered industry training, and internships/traineeships may also meet the definition for industry training, a reasonable conclusion would be that industry training is one of the most common forms of WBL. These WBL arrangements are common around the world.

Differences between types of WBL come from the:

- varying levels of status and integration in real or simulated workplaces,
- varying amounts of on-job learning to off-job learning in any programme of study,
- varying amounts of time spent in the workplace,
- whether or not it's part of any programme of study; and
- whether or not there is recognition and/or accreditation of any programme of study.

Integration with the Workplace

All WBL is designed to deliver industry-relevant learning, but each mode of learning gives different levels of workplace context.

Off-job learning is delivered independent of the workplace and is therefore subject to the assumption of relevance: assuming that the learning being delivered out of the workplace will be relevant to the workplace environment. This is a common challenge in WBL. To navigate this challenge, industry must have significant input into the design of learning outside the workplace to ensure that it delivers to their needs or, more effectively, industry be involved in the delivery of learning through on-job Learning. The more that industry is engaged in the design of off-job learning, the more integrated the programme will be with the world of work.

On-job learning comes from doing work, which is what makes it relevant. While it is fully integrated learning, it still requires organisation to ensure the scope and level of learning provided allows the learner to progress; and it requires input from mentors and coaches in the form of feedback to aid the learner to reflect on their practice and change. In addition, where on-job learning is part of an accreditation process, it requires scheduling against relevant accreditation frameworks and criteria such as apprenticeship frameworks and formal workplace attachments learning outcomes.

Workplaces may have different levels of interest in WBL; however, their involvement is essential to ensure learners develop industry-relevant skills. Some WBL activities are completely embedded and measured within the workplace, such as unit standards in qualifications., However, other WBL activities focus on exposing learners to workplaces and may not set or assess learning outcomes or objectives. These rely on employers providing relevant experience and learning (which is generally around workplace disciplines). Institutional providers often provide WBL without direct exposure to workplaces relying on a combination of practical sessions, case studies, simulations and the like. The key assumption here is that the programme designers and facilitators understand workplaces and the work carried out in them.

On-job-Off-job Learning Blend

A key difference between models of WBL comes from the amount of learning that takes place on-job and what learning takes place off-job. The blend identifies the overall model of delivery and influences the location where learning is based. Where the workplace is the main location of learning (on-job learning), the learner is usually an employee or has a similar status and contracts. Where an education and training institution is the main location of learning (off-job learning), the learner is usually a student. Within dual training systems, the typical proportion of on-job to off job learning is 60% and 40% respectively, as measured by credit completion, although this varies by occupation. WBL programmes can be 100% on-job, 100% off-job, or any blend in between.

Timings of Workplace Experiences

When workplaces are used as learning environments they can be used to develop, reinforce, and apply knowledge, skills, and competences. If experience in the workplace occurs before off-job learning, this can develop knowledge, skills, and competences to be deepened through further learning activities. If workplace experience occurs after off-job learning, this can reinforce these learnings. Lastly, if workplace learning and off-job learning occur together, however close in time this may happen, the learner can directly apply knowledge, skills, and competences as they learn them. There are no fixed rules regarding the timings of workplace experiences, however, on-job learning and off-job learning should support each other.

Programmes of Study

Whether or not there are programmes of study, or learning frameworks, determines the learning mode. These include:

- **Formal learning:** WBL activities which have clearly defined programme outcomes with learning objectives delivered in a clearly structured way and often accredited or recognised through learning institutions.
- **Non-formal learning:** WBL activities that have learning objectives which are not structured into formal programmes but may be assessed within a wider development context. Examples might include on-job training activities that are not linked to a course of study; community-based training; seminars and conferences; and professional development.
- **Informal learning:** WBL activities which may be assessed against programme standards or outcomes (for example competence standards) but do not have formal learning objectives. This includes learning through workplace activity with feedback on practice and progress; and the learning gained through real life experience and challenges. The learning is strengthened through practice, reflection, feedback, and coaching.

Recognition and/or Accreditation

Formal recognition is acknowledgement from an external organisation showing that programme outcomes have been achieved. Types of WBL can be recognised through a variety of organisations such as National Qualifications systems and frameworks, learning organisations and institutions, and trades or professional bodies. In WBL, accreditation of knowledge, skills and competences are generally part of dual training, with both on and off job elements being recognised. Commonwealth

countries and those with historic links to the British Empire often split WBL into apprenticeship certificates assessed through skills/ trade testing; and formal learning - vocationally focused learning outcomes accredited through TVET institutions. The dual training systems found in developed countries are not generally found in developing countries except where the country has a close relationship with a developed nation. The Cook Islands, for instance does have close links with New Zealand and uses New Zealand industry qualifications in some trades areas.

This is a key issue; the recognition of workplace learning allows those acquiring competence in the workplace to have their workplace learning accredited. This opens the qualification, and learner funding and support systems, to marginalised learners such as informal sector and rural workers within developing nations. It also involves employers in the system of skills formation and accreditation. This has longer term impacts on the depth and variety of skills in the national labour market.

Industry Training: Our Context

Industry training does not have a clear definition within WBL so we need to give it a working definition.

Employers require their workforce to have a certain set of knowledge, skills, and competences to be effective. These must also be demonstrated to an acceptable standard within the employer's context. Achieving competence is the principal goal of WBL activities. Three aspects should be highlighted here: first, the relevant knowledge, skills, and competence; second, performing these to a certain standard; and third, applying these in the context of the workplace.

Knowledge, skills, and competence can be developed anywhere in an educational setting, in a workplace environment, or independently. Mostly, however, their development occurs naturally in the workplace. This sits well with the Lombardo and Eichinger 70:20:10 model of learning and development (Lombardo & Eichinger, 1996) which indicates that most WBL is through doing in the workplace (70%) which is in turn shaped by coaching and feedback (20%) and deepened by formal learning (10%). This model is reflected in decades of practice under dual training systems which allocate between 60 and 80% of learning to the workplace and the remainder to formal learning provision.

Figure 7 below provides a holistic model of WBL systems and shows the locations of learning, the types of learning in these locations, and how these learning methods are usually assessed. Industry training integrates with this model based on the 70:20:10 split described above.

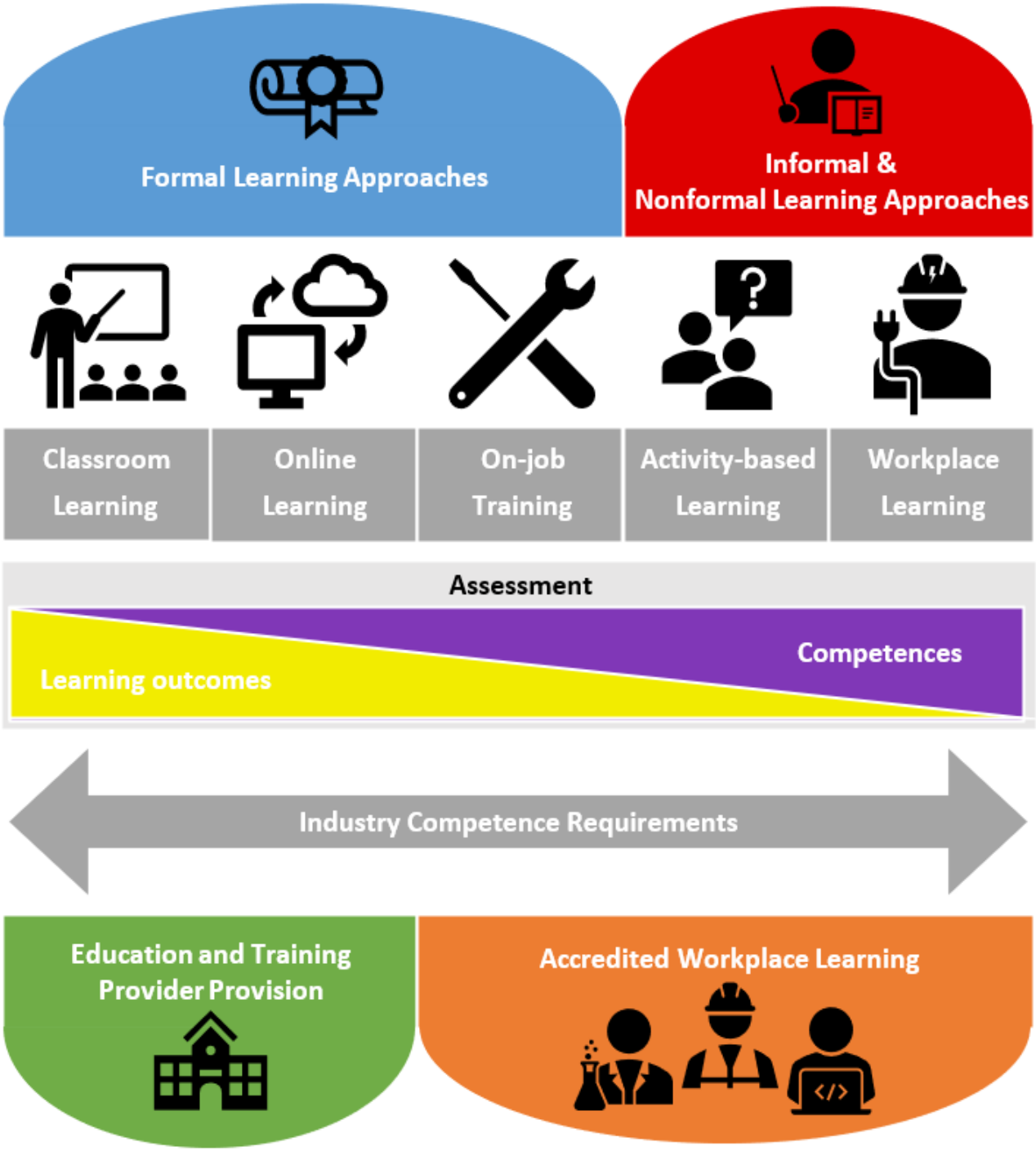

Figure 7: Modes of delivery in Work-based Learning.
Source: The Skills Consulting Group, 2021

This model works in successful dual training and industry training systems across the globe (Eichhorst, Rodríguez-Planas, Schmidl, & Zimmermann, 2015) and is the model we use in our research. Importantly, it is a multiple stakeholder model with employers working closely with qualification developers, and formal training and education providers, to deliver effective work-based learning. It takes the natural learning that takes place in the workplace and combines this with job experience: the rich learning obtained from watching and doing; the feedback and coaching from

competent co-workers and managers; and the perspectives, knowledge, and skills obtained from institutional learning providers.

Employers have the opportunities for learners to gain experience in context (**on-job learning**), however, they usually do not have the resources to offer learning experiences beyond their usual operations. Note that some employers fund and deliver high-quality training activities for their staff, however, this is not the norm. In this research, for example, employer stakeholders who offer training to their employees described their training as a necessary response to skill-gaps in graduates, the lack of programmes, or the specialised training their organisation needs.

Training providers typically do not have the ability to give learners direct workplace experience, however, they meet the requirements to deliver structured learning experiences (**off-job learning**). Again, note that some hybrid employer-education institutions exist. These can be employers who offer training more widely than their own organisation, or education and training providers who establish business entities for their learners to experience.

These two learning locations, on-job and off-job, support each other by addressing the others' shortcomings. On-job learning allows learners to practice, reinforce, and apply concepts that are learned outside of the workplace; off-job learning allows learners to gain knowledge sets, skills, and perspectives in ways that employers cannot, due to time, resources, or opportunity. On-job learning is the main delivery mode in industry training; however, off-job learning is important too and creates synergy with on-job learning (Association of Employment and Learning Providers, 2020).

There are no distinct boundaries for the blend of on-job and off-job training in industry training programmes, only that learning should occur naturally and be supplemented where needed by formal learning. As previously mentioned, industry training/dual training systems often have between 60-80% of learning on-job, following the 70:20:10 learning split. In different contexts, industries, and occupations, the blend of on-job and off-job learning may change. However, it may still be considered industry training if the main location of learning is the workplace. This is an essential concept to the definition of industry training: industry training is a broad model that adjusts to meet different circumstances however the underlying learning theory remains aligned with the 70:20:10 split.

So, while noting many definitions and boundaries in the literature, in this project we will define industry training as:

INDUSTRY TRAINING

A mode of learning where learners develop competence mostly through the workplace, however, develop some complementary knowledge sets, skills, or competence outside of the workplace.

This research will look at formal and informal industry training programmes both with and without recognition or accreditation. This is to capture all forms of industry training that might be occurring in our focus countries. The core factor that we will use to identify industry training models is whether a programme predominantly uses on-job learning supported by off-job learning.

To be clear, the most common arrangement of industry training is the apprenticeship. In apprenticeships, the learner develops workplace competence mostly in the workplace but may also

through off-job learning. These off-job learning activities vary according to the principles outlined in the sections above, however, the main model of apprenticeship is unchanging. Other arrangements can be considered industry training if they meet the definition above. Some traineeships, internships, and workplace experiences cross over into this concept however the gold standard of industry training is the apprenticeship.

Further differentiation comes from the types of apprenticeship: often considered to be modern, graduate, and traditional. Modern apprenticeships are usually considered those where the learner works toward a qualification as part of the apprenticeship. These are often more formal. Graduate apprenticeships typically refer to those which learners work toward a qualification at higher education/degree level or above. Traditional apprenticeships are often non-formal or informal and unaccredited. For the purposes of this research, however, we will treat these as the same concept unless relevant to the findings and discussion.

Industry Training is a specific area within WBL that may not be clearly represented in the Pacific. So, to ensure that we understand the full skills-development systems in our focus countries, we will seek information for WBL generally and identify where industry training models exist within these. We will also look for opportunities for industry training models to be applied.

Developed Pacific Industry Training Models:

Aspirations and Successes

New Zealand and Australia are Pacific countries that have established and successful industry training systems. There are differences between these countries and our focus countries. The countries are relatively larger in both land and population; their economies are more diverse and wealthier; and they have greater infrastructure to support investment. By looking at what these countries do well however, we are able to identify core elements of their training systems which have the potential to support greater implementation and establishment of these systems in the Pacific.

The New Zealand and Australia industry training systems are outlined in Appendix 14 however their shared factors are described in the section below.

Shared Structural Factors between New Zealand and Australian Industry Training Systems

The models that are operating within these two systems are somewhat different but have common factors that help them achieve effective learner, and subsequently, industry outcomes.

Firstly, policy underpinning these systems and organisations is clear and defines their roles and responsibilities. All key stakeholders are included, there are no overlapping responsibilities or mandates, and performance criteria for these organisations are well defined.

This results in an integrated system with fewer key organisations that coordinate more easily with each other where needed. A model of an integrated industry training system is provided in Figure 8 below for reference but these concepts are further explained in the working model of success factors on page 62 and in Appendix 12. Centralised systems exist for overlapping areas such as funding and quality assurance so that these functions are applied consistently within the systems

and between stakeholders. New Zealand has a more integrated system The Australian system faces challenges in coordination between th federal and state level organisations. in However, this is mainly because of fundamental differences in governance systems and population size.

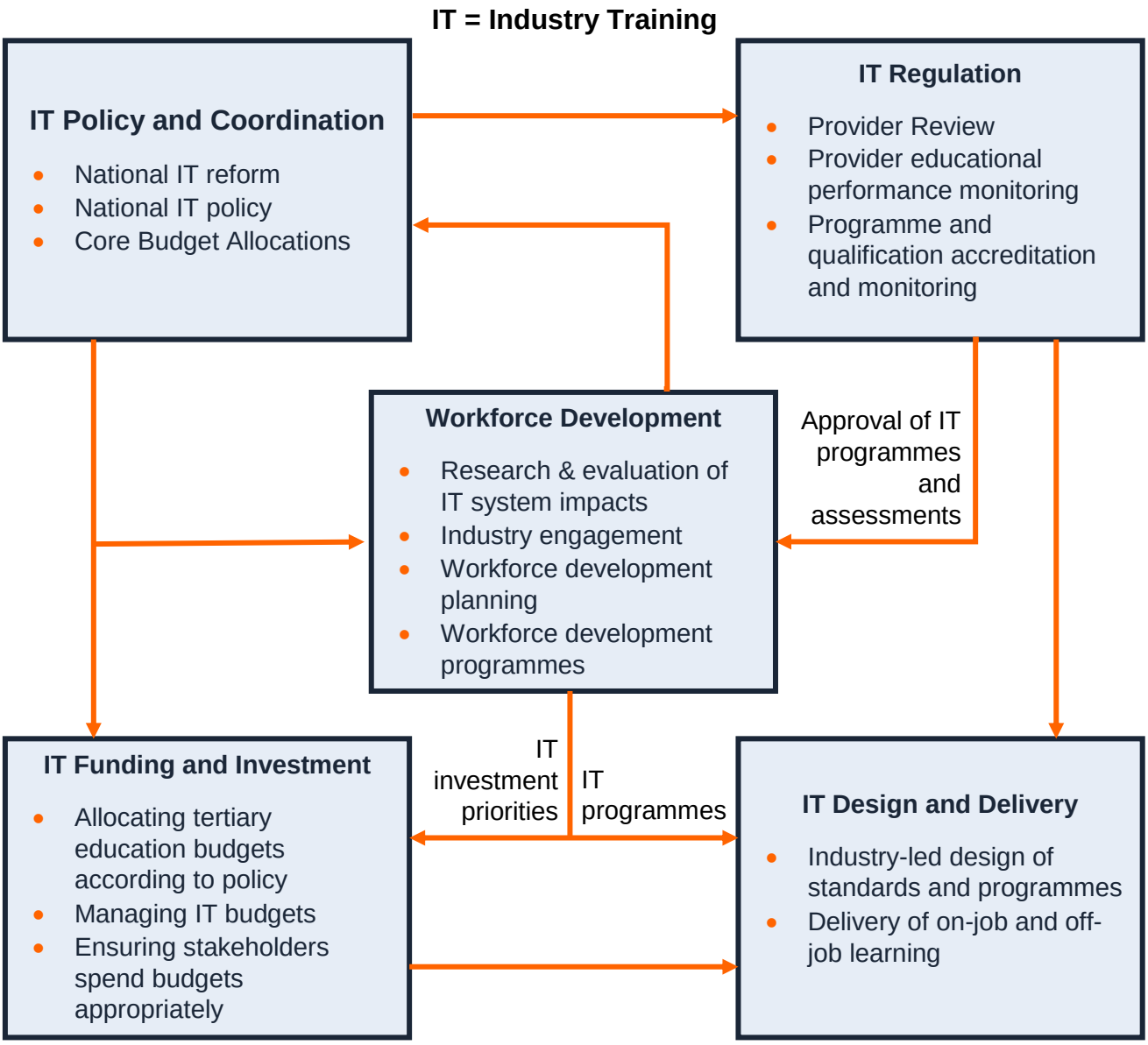

Figure 8: Model of an Integrated Industry Training System.
Source: The Skills Consulting Group, 2021

Industry Training Organisations (ITOs) in New Zealand and the Australian Apprenticeship Support Network in Australia. This is a key function of success for these systems. The two key stakeholders to industry training are the employer and the learner: the one doing most of the training and the one being trained. These intermediaries help to arrange off-job training for the learner. They help connect employers with apprentices; and they provide support to learners to ensure their learning is progressing. These groups need to have few barriers to participation so that the system can run to its full potential; this is achieved through these mechanisms.

In these systems, the standards to which employers and education providers deliver to are set by industry. Industry involvement is considered a core element for the development of quality

standards in many systems throughout the world (Misko, 2015). In New Zealand and Australia, industry creates national standards for learners to achieve in collaboration with education experts. The industry describes what they need and the education expert helps to define and capture these requirements in assessable standards.

Stakeholders who would want to deliver these national standards based programmes need to meet strict quality criteria. This is done through provider accreditation and apprenticeship contracts with employers that set out responsibilities and expectations. Employers are subject to employment law and their training agreements; education providers are responsible for monitoring their own activities and reporting on these to an external regulator who also provides periodic reviews of their performance. These processes ensure the quality of design and delivery of programmes.

Dedicated funding for vocational education in these systems recognise the stakeholder relationships involved and incentivise their participation ((Tertiary Education Commission, 2021) (Ferguson, Ey, & Maslaris, 2020)). Providers, Employers, Governments, and Learners all receive benefits from industry training; therefore, costs are shared among them. These costs are not always financial. For instance, employers must contribute their time to develop industry standards and are not always compensated, at least not enough to cover the opportunity costs. Though, employers in these systems are often happy to bear these costs as they know the benefit to them, an effective workforce is much more valuable. The overall sharing of costs should maximise participation in the system and incentivise quality outcomes.

Both New Zealand and Australia also have established methods to evaluate skills supply and demand. Well-resourced agencies have responsibility for this, and their performance is tightly managed. Quality labour market information is needed to establish the need for skills supply and accurately meet it.

The factors described above do not cover all the shared structural factors between the New Zealand and Australian systems, however, they describe some of the key elements that are contributing to their national successes in industry training.

Lessons and Potential Case Studies from Industry Training in Development Contexts

Fiji Industry Training Models: The Move to Integrated Training

Context

Fiji is a middle-income nation in the South Pacific. It is one of the larger PICs, second only in population to PNG. It is remote to international markets and lacks any significant natural resources other than agriculture and fisheries. Its labour market is highly dependent on hospitality which makes up roughly 40% of GDP and which has been severely impacted by the Covid19 pandemic. Remittances from expats make a significant contribution to inward investment and income.

It has a young demographic profile with a fertility rate well above replacement rate but declining in line with increasing wealth. It is, therefore, at the stage of its development where it needs to invest in its young people. However, because Fijians have access to developed labour markets, including

Australia, the USA and NZ, it has significant brain drain and labour shortages in most skills categories. It has an oversupply of unskilled labour mainly working in the informal subsistence economy.

Fiji, therefore, has direct parallels with the smaller PICs in this research. Its labour markets are subject to the same pressures of immigration and skills importation. It does, however, have the advantage of greater scale, having a population roughly 40% larger than the biggest of the six PICs in this study – the Solomon Islands. Fiji's per capita GDP is also among the higher in the South Pacific which means it has the capacity to fund a relatively larger and more complex higher education and industry training sector. However, as Fiji is currently struggling with the reform of Industry Training, it can provide some insight into what has and has not worked, and a helpful example for future reform.

Fiji Higher Education and Industry Training Arrangements

The Ministry of Education, Heritage and Arts (MEHA) has the national education portfolio, with the National Training and Productivity Centre – a registered Higher Education Institution (HEI) - being responsible for managing and developing apprenticeships and short courses relevant to industry training. The Fiji Higher Education Commission (FHEC) is responsible for the national qualifications system and for regulating providers. HEIs are responsible for education delivery.

Funding is through MEHA and the Tertiary Education Loan scheme (TELs) with FHEC providing the regulatory approval required for HEIs to access public funding and the TELs system. Education budgets have had cuts of ±8% in response to large reductions in government revenues brought about through the collapse in tourism during the Covid19 pandemic. Revenue is anticipated to increase as normal growth resumes as Covid19 becomes endemic. The TELs provides some stability to HEI funding as it is a combined scholarship and low interest loan system which allows students to delay repayment till after graduation. The TELs has also been extended to Technical and Vocational Education and Training (TVET) students with an additional 5000 places being supported in TVET providers.

Industry Training in Fiji has undergone a series of rapid changes brought about by changing political priorities and the decline of the apprenticeship system over the last two decades. Currently the apprenticeship system provides places for just over 100 apprentices each year, a sharp drop from earlier decades where numbers were in the three to four hundreds. The factors driving this decline include the slow loss of relevance of the apprenticeship system. It has not been reformed and is a test-based system built around traditional trades. In addition, key employers have withdrawn, and trainees have moved into college based TVET provision. TVET is a relative success story in Fiji with USP, FNU and APTC providing qualification and short course-based TVET programmes.

Training by industry was supported by the levy system which required employers to pay a percentage of their salary budgets into the NTPC levy fund. This fund supported NTPC, the management of the apprenticeship scheme, and the primary sources of funding within Fiji. However, the training levy has been turned into a workers compensation system, while reform to TVET has mainly focused on organisational restructure of the TVET colleges – merging them with the Fiji National University (FNU). Other larger scale providers have access to central government funding and with the expansion of the TELs system to TVET, students undertaking TVET courses at FNU are now eligible for support.

FHEC has commissioned working papers into the establishment of Skills Council Fiji – an employer led organisation. Skills Council Fiji would be responsible for developing and managing a modern apprenticeship system, providing insight into labour market skills requirements, and for developing

industry qualifications. The intention is for apprenticeships to come under an HEI owned by Skills Council Fiji and therefore open a modernised apprenticeship system to central government funding through direct education grants and access to TELs. This, unfortunately, has been delayed by the Covid19 pandemic, however the Minister for Education has recently expressed interest in progressing the white paper to cabinet.

Conclusions

While Fiji suffers from many of the issues faced by other PICs it does have a relatively well-resourced tertiary education sector which can draw on government funding and an effective student loan scheme to support a relatively wide range of formal TVET programmes. Its industrial leadership is highly committed to reforming the apprenticeship scheme, particularly in the construction sector and in sectors which are not traditionally covered by apprenticeships such as hospitality. FHEC has a very clear view about what it needs to do to reform the industry training system, unfortunately it currently lacks the resources to fund their development.

The region can draw lessons from how Fiji fosters both national and regional/international networks of providers to provide depth to higher education in general and industry training. A key lesson, however, is that industry training based on an unreformed model is likely to decline over time. Industry needs to be part of the conversation and, preferably, drive it if industry training is to be modernised over the long term.

Botswana Industry Training Models: The Importance of Industry

Context

Botswana is a high-middle income nation in Sub-Saharan Africa. Due to its landlocked status, low population density, and extremely long transport routes, it has some parallels with PICs, mainly its relative isolation from world markets, the large distances between its main urban centres and a dominant neighbour to its south. Its labour market also highly depends on providing hospitality services. It differs from the smaller PICs mainly because it has a considerable natural resource base which it has used to start its initial post-colonial growth.

Botswana has a classic developing country demographic profile with a relatively young population, a high, although declining, fertility rate and a low ratio of dependents to workers. It is, therefore, in a demographically positive position for the next twenty to thirty years. However, the Botswanan labour market has high levels of unemployment, particularly youth unemployment, with two-thirds of the labour market having few qualifications beyond secondary school level. In the context of a rapidly developing global economy and the challenges of the fourth industrial age and its drive to knowledge-based economies, Botswana has a significant challenge on its hands to develop a TVET system capable of growing the skilled workforce it needs.

The economy is diversifying away from resource extraction towards a service and knowledge-based economy. Its longer-term labour market needs, therefore, require a much higher level of skill with professionals, and skilled technicians predominating. Its lower-skilled workers are likely to see their share of the labour market slow and decline. The TVET system will need to refocus and develop the higher-level work-based skills required.

Botswana Higher Education and Industry Training Arrangements

The TVET system is split into secondary and tertiary. At the secondary level, Botswana has 'brigades' – rural vocational schools focused on basic skills formation. At tertiary level, a network of technical colleges provide access to trades and technical certificates and diplomas. The brigades have underperformed for many years, with a focus primarily on lower-level agriculture skills, which puts rural youth at a disadvantage in the job market. The technical colleges, while well equipped, lack the teaching staff to meet demand and the ability to arrange the range and quality of internships required to embed skills. Employers argue that interns tend to lack work-readiness and, that there is an oversupply of university graduates who lack the skills needed by industry.

Policy and Governance is provided by two ministries, the Ministry of Education, and the Ministry of Basic Education, with the Ministry of Labour having some input. The TVET policy lacks coherence, particularly around the transition from secondary to tertiary education and in the design and approval of National Qualifications. Recent policy initiatives have established a new coordinating body for the TVET sector which brings the ministries, providers, and employers together. They have agreed on a national policy for Work-based Learning. This will drive the development of an industry training system based on employer representation and participation in industry training through Industry Representative Bodies. These IRBs will have responsibility for approving apprenticeship frameworks and industry qualifications based on student internships, as well as running apprenticeship placements through the employer levy.

Workforce Development is carried out by the Human Resources Development Council which manages an employer levy system to fund vocational training. Most of this training is short course based and not linked to national qualifications. The Botswana Qualifications Authority is responsible for national qualifications but currently lacks the authority and capacity to carry out its main function of registering these. It shares responsibility for assessment with the Botswana Examinations Council. The resulting tensions have meant that quality assurance of assessment has been contested between agencies. In addition, political interference in the qualifications development process has resulted in a loss of focus in the industry training system which is based on apprenticeships and student internships. Currently the national certificate system, which forms part of the apprenticeship system, is in limbo. Despite this, the private sector, particularly the mining and heavy industry sectors have carried on recruiting and training apprentices, by training them through private training centres. Student internships, which are intended to provide young people with real work experience, are badly run and not valued by employers or learners. Many learners register just to receive the student support grant.

Funding for TVET, where it is available, is through the Department of Tertiary Education Funding which runs a merit-based system of scholarships, grants, and loans. This tends to be focused on university-based education with smaller grants and stipends being made available to TVET students. The result is a funding system biased to the children of the wealthy and elite. Poorer and rural students find it difficult to support themselves with small living grants – so they often have to take on full time jobs which affects their education results.

Conclusions

While the TVET system, and the industry training system, is struggling in Botswana, PICs can draw a clear lesson in the need for industry engagement in the design and delivery of industry training, and the need for coherent, unified governance and policy systems to support delivery. Employers in Botswana are happy to engage with industry training policy development if they feel they are being listened to. They are also happy to invest in industry training if they can see tangible results. However, they are likely to suffer consultation fatigue if the cycle of policy evaluation and reform excludes them or delivers no real change.

The reforms in Botswana use a research-based process to bring all stakeholders into the tent. This has resulted in a broad-based national policy built around industry training. Their Work-based Learning principles include industry involvement in the design and delivery of industry qualifications, dual training design for apprenticeships, and internships with on-job learning components integrated into national qualifications. Finally, Botswana is determined to learn the lessons of the past and focus on a clear and widely disseminated implementation plan. This plan is built on an understanding of the national and international drivers of skills formation, and an evidence-based approach with short, medium, and longer-term objectives to develop their industry training system.

Summary of Industry Training Models from Focus Countries in the Pacific

The models of WBL in our focus countries show education systems throughout the Pacific at different stages of development. The section below provides a summary of the models of WBL identified in our field research. A full description of the industry training models by country is presented in Appendix 9. This should be read in parallel with this section to better understand the differences between countries and the evidence from each.

Comparing these models between countries is challenging - they have different needs and require local context to understand them fully. These summaries should, therefore, be interpreted with care.

The Pacific Island countries in this research have few instances of industry training in their skills delivery systems. They are also largely in the early phases of adopting these models, except for the Solomon Islands which has had a type of industry training operating for a couple of decades with its NTTTC. However, the Solomon Islands system, along with the others, is still a developing industry training system; there are pockets of success but limited national commitment to these models. The systems in these countries are testing the limits of institution-based skills development and recognising the potential of workplace learning arrangements. In some instances, they are beginning to create systems for linking the two.

The dominant method of formal skills delivery in these countries is delivered by education institutions that provide off-job work-based learning. A wealth of vocational learning institutions exists in some of the countries and in others very few, though, this is the most prevalent form of skills delivery. This is a common first steppingstone into the world of work-based learning and is a natural extension from purely academic campus-based education. This method of delivery, however, misses out of a critical element of work-based learning: the workplace. Stakeholders in these countries are beginning to identify the limitations of provider driven WBL –its tendency to lose relevance over time. All types of stakeholders in all focus countries commonly reported that graduates of off-job work-based programmes are not meeting industry needs. These countries are

implementing varying qualities of institutional WBL and with varying degrees of relevance to local industries. Institutions are a core component of industry training systems; they provide focused and deep learning experiences needed to supplement industry competence. Without being embedded in the workplace context though, they are not the heart of these systems.

The dominance of institutions above refers to formal skills delivery – the most common mode of skills delivery in these countries, and everywhere in the world, is workplace learning. These learning experiences occur in our daily working lives, most often informally. The focus countries from the research are in the early phases of incorporating this thinking into the design of their education systems. This is seen in the increasing use of workplace attachments in formal programmes, the piloting of apprenticeship models, and establishing aspects of integrated work-based learning systems such as national industry qualifications. These countries are beginning to realise the potential of on-job learning. Their national policies and strategies are recognising the role that skills development has in their economies and they are beginning to divert resources to these initiatives.

Importantly, several of the focus countries have seen increased workplace learning components in their formal programmes. To increase the relevance of their programmes, some institutions in these countries, such as KIT in Kiribati, SINU in the Solomon Islands, and TIST in Tonga, are offering workplace attachments, which aim to embed and contextualise formal learning through workplace experiences. They are also increasing the value of institution-based qualifications, though, a gap still exists between institutions and the outcomes required by industry.

Skills development systems in several of these countries are beginning to address this gap by including industry when they design their programmes; aiming to deliver outcomes that are relevant to industry needs. The Solomon Islands, Cook Islands, and Kiribati have industry advisory committees for their leading skills development institutions. For various reasons these have not been as effective as intended, though they show that these countries are moving towards demand driven, industry led, systems.

Other signs also suggest that further links between industry and institutions can be expected in the future. These include the Cook Islands which is testing an apprenticeship programme within its hospitality and tourism industry and aims to have a broader apprenticeship system established in the coming years. The Solomon Islands has established a single tertiary education and skills regulator to lead the sector and coordinate skills development functions. Tonga has begun to develop national competency-based qualifications through close partnership with industry and using national standards of competence. These activities signal that governments are embracing the connections between industry and education institutions that are relevant to industry training models.

Niue and Tokelau are notably absent from this list of activities; these two countries are highly limited in the capacity to establish their own education systems. This is true for industry training as it is for general education. Niue, for example, uses the New Zealand secondary school certificate and national quality assurance mechanisms to navigate this challenge. Neither of these countries have qualifications agencies and similar supports for the development of accredited industry training models. While the other focus countries may have made more progress toward establishing industry training models, all have expressed interest in the models. Stakeholders in this research from all focus countries have strongly advocated for industry training models.

There are opportunities here to support these countries as they continue on their pathway to establish effective industry training systems. Some countries such as Tokelau and Niue may require more assistance while others may only need a guiding hand. All are interested in and are working towards successful industry training models, just at different speeds.

BARRIERS TO INDUSTRY TRAINING IN THE PACIFIC

Overarching Barriers to Formal Industry Training in the Focus Countries

It is difficult to make comparisons of the challenges experienced between these countries as each has its own unique circumstances that drive these issues. Barriers for each focus country are presented in full in Appendix 10 and this should be read to understand each country's challenges and the evidence for these.

In the section below, high level themes have been identified between these countries that are important to recognise. These are also set out in Table 33 in Appendix 10. These should be interpreted with caution and local context is key, however, the common barriers to establishing formal industry training in the Pacific, based on our research, are resource and capacity constraints; inadequate or missing coordination and engagement; and limited regulation and quality standards.

Resource and Capacity

Resource and capacity constraints in several areas emerged as the major barriers to progress. The Pacific's relatively unique natural and economic landscape compounds these issues. Geographic isolation, brain drain, and the limited availability of resources to allocate to industry training are challenges in themselves. All types of stakeholders from all focus countries identified the limited capacity as a major challenge to overcome to establish effective industry training in their countries.

These constraints were more pronounced in the geographically and demographically smaller nations in the research such as the Cook Islands, but particularly within Niue and Tokelau. Niue and Tokelau have fewer overall supports that would enable national industry training like an education quality assurance agency.

Resource and capacity challenges often emerged around industry capacity; institutional resource and capacity; and government resource.

Industry Capacity

The capacity of industry to accept and train learners is the foundation of an industry training system where 60-80% of learning occurs in the workplace. Not only do employers need to have capacity, but they need to be willing to accept learners and allocate resource to training them.

In all focus countries there was some degree of limited industry capacity. Much of this is affected by the wider economic environment: features of the Pacific that limit the size of national industries. Industry size was described by stakeholders as a factor impacting the capacity of industry to accept learners. This was particularly seen for specialised trades training such as electrical and plumbing trades.

The most reported limiting factor to industry capacity was the direct or opportunity costs associated with training. Stakeholders in many countries reported that employers could not afford to either send employees away to train or allocate resource within their organisation to train them. Smaller employers were more likely to report this. This concern about employers not feeling they had the resource and capacity to provide on-job learning, was balanced by reports of larger employers providing in-house training throughout these countries. Employers however frequently emphasised the costs associated with training and reported that they were providing training out of necessity. The cost of training is, therefore, a strong limiting factor in industry participation.

More than cost, the attitudes of a minority of employers affected the uptake of workplace training. Some stakeholders reported employers were hesitant to receive learners as they believed taking on trainees would lead to higher costs and leave them at a competitive disadvantage due to lost capacity. Some stakeholders also reported that employers had a lack of trust in their current system's effectiveness and that this was reducing participation. Lastly, a significant minority of stakeholders believed industry training was not their cost to bear, seeing it as a government responsibility. Overall, industry stakeholders were very interested in developing industry training systems so it is likely that many of these attitudes would be minimised with an effective industry training system that meets their needs and shares costs equitably.

Institutional Resource and Capacity

Limited institutional resource and capacity was another key barrier to industry training. While institutional learning is utilised less than workplace learning in these models, it is still an integral part of an industrial training system. It was commonly reported in most countries that institutions had limited resources. They were often financially stretched and, in some instances, government funding enabled their sustainability. Funding cannot resolve all challenges however, as described below.

It was often reported that tutors and trainers were hard to find locally. This reflects the shallow labour markets in the Pacific which has often resulted in international experts being brought in either short-term or long-term to develop skills. Effective national skills supplies will resolve this shortage over time as learners develop into effective trainers, however, these require skills tutors and trainers to be effective.

Another challenge was access to training materials. This was particularly emphasised in Tokelau with the country struggling with to acquire quality construction materials from overseas.

Government Resources

It was commonly reported that governments did not have the resources to properly support the sector, either through building capacity and systems or sustaining industry training over the long term. Several indicators suggest that industry training is a notably cost-effective and effective way for governments to equitably share costs between stakeholders, including employers

(Kuczera, 2017). Therefore, there is the potential for cost sharing from industry training models to reduce the cost burden for governments in the Pacific. This is a key goal of WBL financing arrangements (Sweet, 2018).

To fully capitalise on these reduced costs, governments need to ensure that funding is efficient. Giving attention to the allocation and efficiency of educational funding will ensure that as much as possible is gained from educational investment. One significant challenge is the ongoing need to improve performance monitoring of WBL in the Pacific. Establishing robust measures that support funding allocation will be important; efficiency is crucial to countries with limited national budgets. Given the range of functions that government institutions need to perform, sustainable government funding is critical to creating success for Pacific Industry Training systems.

In some cases, limited government resources also led to a dependency on international funding to support programmes. This was the case in Kiribati. The ability to empower Pacific countries to sustain their own industry training systems needs to be considered for any future work. Pacific governments are generally seeking less economic dependence so it is likely that independent industry training systems will be favoured in the long term. The aim for industry training systems that meet national needs before regional needs was also reported in our field research.

Coordination and Engagement

Coordination and engagement within the training systems of our focus countries was identified as a common challenge. Limited government resources were reported to have flow on effects to the coordination of the system. With few resources, little policy guidance in most instances, and attention directed to other areas, governments were generally ineffective in coordinating their WBL systems. In some instances, they gave policy direction, however it was largely centred around the provision of TVET, learning for the workplace rather than learning within the workplace.

In most cases, industry training systems do not exist, therefore, there were few stakeholders to coordinate apart from institutional providers. These providers were often overseen by education ministries. Where industry training systems existed, they were not integrated systems and were ineffectively leading national skills development. In cases such as the Solomon Islands, which is moving towards a more effective and integrated skills development system, recent policy moves have resulted in conflicting roles and responsibilities. There is a need for clear and transparent direction regarding industry training.

There are few industry groups who can effectively lead and coordinate the sector when the government lacks action or capacity. Some industry organisations operate in the larger countries such as the Solomon Islands, however, they aren't advocating for their industries' needs so this has reduced their impact.

Effective industry engagement is largely missing from the training systems. Effective industry engagement is a foundational requirement for effective industry training systems. Where these mechanisms exist within the six nations, they lack direction and the necessary emphasis on the importance of industry perspectives. Several employer stakeholders reported attempting to establish or utilise existing industry training models but were unable to secure sufficient government support or resource.

Regulation and Quality Standards

Regulation of workplace activity is a common barrier. Many stakeholders reported that building codes were either absent or unevenly enforced. Industry training is in part designed around the achievement of national standards of competence and this is undermined by a lack of coherent standards in building codes.

The regulation of workplace training activities is of mixed quality between the countries and between providers within these countries. Stakeholders reported that the apprenticeship scheme in the Solomon Islands has partially effective performance monitoring, but policy mandates prevent the level of engagement that regulators would like. Workplace attachments in Kiribati and Tonga are also not outcomes-based and are therefore not well monitored for quality.

SUCCESS AND ENABLING FACTORS FOR INDUSTRY TRAINING

Pacific Industry Training: Working Model for Success

Using insights from the research and our experience in NZ and wider international education markets, we have put together a working model to describe factors that predict successful industry training in a Pacific context. This model will be used in the following sections to evaluate what system and environmental factors may be needed to develop industry training in the Pacific. By assessing each country against this model, we can determine where shortfalls exist and what types of industry training models may be appropriate within each context and within the Pacific.

We have made our best efforts to consider Pacific perspectives when designing this working model; however, we cannot consider this a fully contextualised model as it was not designed directly by Pacific communities. Any assessments using these factors should be interpreted with local context in mind. If any of these factors are missing, it may not mean there are shortcomings in a specific system; it may simply mean that underpinning functions are being carried out elsewhere, in different contexts, or informally.

Future research is needed that more closely involves Pacific communities to create a robust and culturally appropriate model of successful industry training in the Pacific.

Appendix 12 fully describes the process of developing the working model and should be read in alongside this section to understand the background to the model.

In the following section, the working model is described and is used to evaluate the industry training systems in our focus countries. Noting the cultural limitations, we will use these success factors and their indicators not as a checklist, but as a frame of reference to understand the current systems and opportunities for their development.

Working Model of Pacific Industry Training Success Factors and their Indicators

The working model for success factors provides a set of criteria with which we may evaluate the current state of Pacific industry training models and systems. The model includes functions that are critical to high quality industry training as well as the systems that support industry training models.

The model is framed around five functions: policy and governance; regulation and quality assurance; funding; design and delivery; and workforce development. These are key functions that support effective industry training models. These are relatively constant but can be represented in different ways. For example, quality industry training must be regulated to ensure quality, but the role of the regulator and the style of regulation may change depending on local needs. These are explained below along with their significance to, and impacts on, industry training models and systems.

Policy and Coordination

Policy and coordination systems underpin all national learning models and systems, including those for industry training. Good evidence-based policy sets the foundations and creates the environment for stakeholders of industry training to engage with purpose. It drives effective coordination of the training system, ensures that roles and responsibilities are understood, stakeholders are working towards mutual outcomes, and the performance of educational systems is regularly evaluated and reformed when required. Coordination in the form of governance arrangements provides the systems of reporting and accountability and are vital to ensure that the various components of the system function effectively and perform to their potential. The Botswana case study (p.53) shows how confusion in governance and reporting systems can undermine the quality and focus of industry training.

Quality industry training can exist without effective policy and coordination, but this relies on ground up organisation within a polity which has a deep tradition of cooperation. The North-western European dual training systems are an example of a longstanding industry training system with its roots in the trading guilds. It has now evolved into a modern national industry training system – with some help from the state but primarily through the primary stakeholders acting locally. Where there is consensus amongst the stakeholders, the probability of developing an effective industry training system is considerably increased.

Regulation

Effective *regulation* is essential to ensure quality within industry training systems and with the implementation of industry training models. Most often, formal industry training models will be implemented within regulatory environments that set participation requirements for education providers and standards for qualifications and industry participation. It is possible for non-formal and informal industry training models to be of a high quality, however, without independent evaluation and performance monitoring, it is difficult to show/prove this. Also, it is more challenging to communicate this high quality to other stakeholders or those in other skills training systems.

Regulation establishes trust in the effectiveness of a training system. Trust in outcomes is of particular importance to industries which need standards of practice such as electricians and plumbers within the construction sector. Regardless of existing industry training systems, regulation is highly important to all models of industry training.

Funding

Funding systems are another essential area of industry training systems and models. All types of industry training incur different costs by/from multiple stakeholder groups – governments, education institutions, employers, and learners. These costs vary depending on the sector, occupation, and environment but must be met for training to happen. It is essential that these costs are met sustainably; without sustainable funding, industry training will not happen. It is important to recognise that this funding does not need to come exclusively from governments. Efficient industry training systems distribute their costs in proportion to the benefits that these stakeholders receive from training. For example, employers may pay wages to learners embedded in their organisation, learners may contribute to their costs of training, education institutions may absorb the costs of providing off-job learning, and governments may pay grants to education providers, both institutions and employers, to facilitate their training activities. Effective funding systems create the right balance of incentives to participate in industry training, which are not always financial benefits, and ensure equitable and sustainable funding arrangements.

It is also important to recognise that funding systems provide an effective tool for monitoring and evaluating the provider and programme performance. Outcomes-based funding systems provide the most direct link to performance, however, input based systems can also be designed around basic performance standards.

Design & Delivery

The *design and delivery* of training is the main way to differentiate between industry training models. As described in earlier sections, industry training is a mode of skills delivery where learners gain competence mostly in the workplace but also supplemented through off-the-job learning. There is scope within this model of learning for a variety of different programme structures. For example, the learner could be an employee or a student; there could be anywhere from approximately 0% to 40% off-job learning within the programme; and learning and assessment for both on and off job activities could be conducted through any of a wide range of methods. The only essential factor to high quality industry training design and delivery is that industry is involved in both.

Workforce Development

Lastly, *workforce development* is an important function of industry training systems. It ensures that skills supply meets skills demand, evaluates the impacts of the training system on the labour market, and ensures investments in industry training are effective. Without proper workforce development mechanisms, industry training models have no collective vision to link them together then other areas such as policy and funding have less evidence to inform them. Workforce development activities coordinate all skills development activities in an industry, country, or region to meet workforce strategies. This includes strategies to meet the growing demand for construction skills, as identified in the previous sections. The alternative to formal workforce development systems is an open education market, allowing providers to compete directly with each other and to make the pitch direct to learners. This model requires effective competition but is still at risk of providers tempted to overstate the commercial value of a qualification.

Table 4 below fully describes each dimension with both their success factors and indicators.

Table 4: Success Factors of Pacific Industry Training Systems and their Indicators.

DOMAIN	SUCCESS FACTORS	INDICATORS
POLICY & COORDINATION	Policy is evidence based and responsive to national, labour market and learner needs	• Policy is continually updated through targeted evidence-based research • Government has a culture of continual improvement • Impact of policies are evaluated, and lessons integrated • Budgets are allocated in line with stakeholder need and required impacts • Policies do not detract from nationally beneficial regional cooperation initiatives
	Skills policy is described clearly across policy and governance, and represents stakeholders needs and capabilities	• Policy identifies the key stakeholders, in government and non-government organisations, and addresses their needs, contexts, and roles • Policy establishes clear aims, principles, and accountabilities for skills development arrangements • Policy addresses the development needs and limitations of the national labour market
REGULATION	Regulatory arrangements are robust and enable effective labour market and programme outcomes	• There are robust evidence-based criteria for provider participation and educational performance. • Educational performance criteria are clear, evidence based and support inclusion and learner achievement. • The participation of providers in IT is managed to remove or reduce harms to learners' educational welfare. • Educational performance is effectively monitored and managed in accordance with educational performance requirements. • There are clear, fair, and transparent processes and systems to support learner and provider participation and management.
	Programmes and qualifications are	• Qualification and programme design requirements are clearly described

DOMAIN	SUCCESS FACTORS	INDICATORS
	described clearly and are responsive to learners' needs and capabilities	and support effective programme outcomes. • Qualifications align with labour market requirements. • Programmes are well resourced and support achievement of the programme learning objectives and standards. • Programmes are linked with / part of progression pathways to facilitate learning and career advancement.
FUNDING	Funding systems provide the incentives and support needed to sustain participation by learners and stakeholders	• Funding systems provide equitable access to learning opportunities based on learners' needs. • Funding incentives are designed to maximise sustainable participation by learners and employers in programmes.
	Funding systems drive and sustain consistent and effective provider performance	• Providers have access to the funding required to sustain performance. • National investment in WBL is based on national and labour market needs and priorities.
DESIGN & DELIVERY	Programmes and qualifications are relevant to labour market and learner aspirations	• Employers and social partners are engaged in designing, approving, and reviewing qualifications. • Qualifications are integrated into career and progression pathways.
	Delivery of learning and assessment is effective, efficient and serves the educational needs of students.	• Programme Teaching and learning methods enable the achievement of programme learning outcomes. • Programmes and learning methods are structured to support learner progression. • Programme design and delivery is inclusive and address the learning requirements of all its learners. • Teachers and trainers have the knowledge and skills required to teach the programme.

DOMAIN	SUCCESS FACTORS	INDICATORS
		• Programmes are resourced to meet their design and teaching requirements. • Learner enrolment ensures that learners have the capabilities and aspirations required for successful completion. • Learners' prior experience and knowledge is recognised. • Assessments are valid, sufficient, and fair, and avoid overburdening learners. • Assessment results and judgements are quality assured. • Design of programmes considers traditional knowledge and skills where appropriate.
WORKFORCE DEVELOPMENT	National labour market and workforce development needs are recognised and addressed	• There are rigorous and effective processes for identifying labour market needs and trends. • National workforce development priorities and plans are produced in consultation with key labour market stakeholders. • National workforce development priorities inform workforce investment.
	All stakeholders are engaged and contribute effectively to workforce development	• Industry training is promoted and supported as a viable and valuable occupational choice. • Stakeholders are provided with the support and incentives they need to participate fully in the IT system.

Identified Gaps between Industry Training Success Factors and Industry Training Systems in the Pacific

To understand each country's status against the identified success factors for industry training (Table 4), a high-level gap analysis was performed. This involved both desk and field research findings. Going beyond the current models of industry training, this analysis gives an overview of the current industry training models and systems from these countries and where gaps may exist.

The scope of this research did not allow for deep evaluation of these indicators. Therefore, further work in partnership with local governments and stakeholders of the system is needed to fully understand and evaluate each country against these indicators.

Note that a lack of information does not necessarily reflect a gap in the system; though, it may indicate weak information management or collection. It is likely that some information relevant to these gap analyses is known only by the subject stakeholders. It is possible that local market consensus-driven solutions may produce effective outcomes for the resources available. However, these solutions are likely to be limited in scope due to the limited resources available and hold back further development in line with the aspirations and growth potential of the PICs.

The section below presents high-level elements within each area, based on the information we gathered in the research: policy and coordination; regulation; funding; design and delivery; and workforce development. Key gaps are presented here. Appendix 5 contains a more comprehensive, but still high-level, analysis and presentation of evidence which should be read alongside to better understand each PIC's current status.

Cook Islands

Identified gaps against industry training success factors in the Cook Islands:

- Skills development is underrepresented in Cook Islands policy. No dedicated skills formation policy exists in the Cook Islands beyond the outdated and underused Apprenticeship Act. Skills formation is mentioned in national strategy documents and is emphasised as a focus for the future.
- The Ministry of Education Planning, Policy, and Review Division is tasked with reviewing education policy and a robust national strategy for the collection of information exists. However, educational statistical releases continue to have very little information about skills development, tertiary, and vocational education. Indicators for successful industry training are limited to an increased number of TVET graduates from the Cook Islands Tertiary Training Institute (CITTI).
- National plans, developed from national strategies, impact on budgetary allocations. Plans consider the impact of activities on the wider region however they hardly mention skills development or industry training. Policy gives little recognition of skills development stakeholders beyond CITTI, however, the Ministry of Education has stated its intention in these policies to increase ownership of education processes by different stakeholders at different levels.
- The government has made statements in strategy documentation about continual improvement and evaluation intentions however it is unclear how they will effectively review the skills formation system and policy. CITTI is subject to Ministry of Education reviews, as a subsidiary, but the research did not identify any criteria, provider participation, and programme approval. Some programmes offered through CITTI are quality assured through international accrediting agencies. Available documentation more clearly sets out teacher performance management and quality assurance in general education.
- Funding for the skills development system was thin and insufficient to enable quality outcomes over time. CITTI, as the dominant WBL provider in the Cook Islands, needs consistent and sustainable financing. Scholarships are available to all students, including those wishing to study WBL programmes at CITTI which alleviates some access challenges, however, courses tended to be too expensive.

- Funding is also currently focused on increasing supply of graduates from CITTI, among other tertiary providers, including those overseas. It is unclear how effectively this will address skills demand as stakeholders reported CITTI programmes as generally being of low relevance to industry needs. This was also reported for some overseas programmes that learners were part of.
- There is some evidence of providers such as CITTI engaging systematically with employers but these processes aren't very effective according to employers.
- There is no national qualifications framework to list qualifications against however CITTI does have some programmes accredited with international agencies and frameworks. This helps with labour mobility, particularly to New Zealand and Australia where these qualifications are recognised. The option to develop a national qualifications framework is built into policy however this has not yet been actioned and it is unclear whether this will be actioned, particularly due to the Cook Islands close relationship with NZ and the established NZQF. Though, it was reported that NZ programmes in construction were, to some degree, not teaching outcomes needed in the Cook Islands context.
- Insufficient information was available to evaluate the learning structure and design of programmes as well as the teaching and learning methods in the construction sector.
- The Ministry of Education has an Equity, Access, and Participation policy designed to make all programmes inclusive. This relates to the areas of access, programme content and design, and delivery. There is insufficient information overall to make judgements about the inclusiveness of programmes at CITTI, however scholarships enable access and the institution makes efforts to provide community-based training in the Pa Enua (outer islands).
- No specific workforce development plans were identified in the research. National planning documents describe priority areas but no specific plans for their development.
- Without current industry training models, full evaluations of stakeholder participation incentives are not possible. This research did not identify incentives and detailed arrangements for the current hospitality and tourism apprenticeships. Although, funding and capacity were identified as key issues for both employers and institutions, incentives will need to consider this limitation.

Kiribati

Identified gaps against industry training success factors in Kiribati:

- Kiribati has no dedicated skills development policy. Education policy is limited to academic education and the school system. Tertiary and vocational education is the responsibility of the Ministry of Employment and Human Resource while education below this is the responsibility of the Ministry of Education. Responsibilities are reasonably clear however as industry training models and learning pathways are developed these roles will need clarification.
- National planning informs budgets for skills development, however much of the budget relies on international funding which brings its sustainability into question. This funding is sufficient to support quality provision, however KIT does not have the capacity to keep up with enrolment demand. Government funding mechanisms, according to stakeholders, could also be made more efficient.
- Industry engagement in the design and delivery of programmes is ineffective. Course Advisory Committees include industry members and allow their input into the design of programmes at KIT, though some industry stakeholders reported that their perspectives on

programme design are sometimes excluded. Industry and KIT need to engage more closely on programme design and, particularly, delivery.

- Workplace attachments, called apprenticeships in Kiribati, are not outcome based and there is little communication between stakeholders about learner needs. These attachments could be better implemented to ensure that learning in workplaces is coordinated and relevant.
- Scholarships are often the defining factor to accessing education in Kiribati. Equitable funding models need to be established for institutional learning. If industry training systems are to be established, learner access will need to be addressed; although, industry training learners have the benefit of earning and learning at the same time. This may reduce these barriers but the cost of institutional education still remains.
- Programmes from KIT are - in some areas - too low-level for industry needs, with many internationally accredited courses not matching the required level of competence in the Kiribati labour market. A key factor is the government's stated preference for international accreditation. International accreditation is valuable for labour mobility and individual workers; however, Kiribati and KIT will need to balance labour mobility with the skills needs of their own economy.
- There is also a similar risk for the regional accreditations KIT has achieved. As KIT is accredited with the regional Pacific Quality Assurance Framework, there is a risk that some elements of their regulation will be inappropriate for KIT. This risk should be noted for the development of future system features, but no problems were identified.

Niue

Identified gaps against industry training success factors in Niue:

- No dedicated skills policy exists in Niue. The Education Act of 1989 is limited in scope - guiding the provision of technical subjects within government schools, including trades; but, with no provision for industry training or skills formation.
- The public sector has also recently been through a review process to improve its effectiveness but the outcomes of this are unknown.
- The government has limited resources to allocate to education beyond salaries for education officials. This means that funding for improvement initiatives is very limited and the system is dependent on international aid.
- Regional cooperation is directly relevant to Niue's skills development strategy. With close a partnership with New Zealand, further training opportunities in New Zealand are an important part of the national skills development strategy. Construction programmes in Niue High School, the only formal construction training in Niue, integrate well with the New Zealand system and learning pathways. This may however undermine the supply of learners to any national industry training programmes that are established. Learners have strong economic incentives to migrate to New Zealand and train there. With such a close relationship and migration pathway already established, Niue may need to consider its supply of learners and how it can provide incentives for local industry training options if local models are to be developed.
- No industry training qualifications are offered in Niue. Secondary school trades certificates also don't meet industry needs. The need for relevant qualifications is however overridden by the need for institutions that can deliver them.
- No formal TVET providers exist in Niue. The close relationship with New Zealand may be an option for additional off-job learning for industry training models. Otherwise, local off-job

training options will need to be established. Skilled employers might be able to take up this role with the correct incentives.

- Niue has no method for monitoring workforce management beyond regular labour force surveys.

Solomon Islands

Identified gaps against industry training success factors in the Solomon Islands:

- The Solomon Islands has recently reviewed and reformed its education policies. The most significant change is establishing the Solomon Islands Tertiary Education and Skills Authority (SITESA) in 2019. SITESA marks a significant move towards an integrated WBL system, although responsibilities are currently unclear and overlap in some areas. As the Solomon Islands moves to implement the reforms, care will need to be given to assigning responsibilities and clarifying governance roles with the Labour division of the Ministry of Commerce, Industry, Labour, and Immigration (MCILI). Changes to other policies, notably the labour act, establish effective employment conditions for apprenticeships and are a solid policy foundation for the extension of WBL in the Solomons.
- Regulation of RTCs is a challenge for regulators due to RTCs being privately owned and teaching to varied curriculums. As these non-accredited institutions do not receive public funding, regulators cannot currently manage their participation and therefore impact in the system.
- Further, regulation of on-job learning from apprenticeships is not well monitored, if at all. MCILI are not able to monitor and assess provider performance to the level they need to due to policy constraints. They are currently restricted to testing students and checking providers have the right skill sets and required tools; they would like to widen their mandate to include monitoring of provider standards. It is unclear whether these functions will shift/transfer to SITESA in the future; clarity on the boundaries between these entities is needed to make the system more transparent and accountable. Appendix 10 elaborates on these boundary challenges in this state of change. The requirements for employer led workplace learning are not clearly set out and monitored. Ensuring quality workplace learning is essential in industry training systems; 60-80% of learning in these systems occurs in the workplace so this must be effective.
- Most funding for providers goes into operating costs while capital budgets are constrained, limiting investment in training facilities and equipment. SITESA is tasked with reviewing the funding for providers though it is uncertain when they will perform their first funding review. To make up this difference in funding, providers charge learners higher fees.
- Industry engagement groups and processes need strengthening, particularly the Industry Standards Advisory Group (ISAG) under the National Trade Testing Training and Certification Unit (NTTTU) which lacks direction. Industry needs more direct influence over the content and delivery of WBL programmes.
- Little is happening in the Solomon Islands to make skills training more inclusive. Some initiatives exist in general education such as the education implementation and monitoring committee within MEHRD, however few exist in the WBL system. There are some advocacy groups for women and people with disabilities. In addition, some RTCs and CBTCs are making progress toward including learners, particularly rural and remote learners; however, more needs to be done to create a truly inclusive WBL and industry training system.

- Finally, there is a lack of labour market research which means there is poor tracking and monitoring of participation in programmes and employment trends in the construction workforce.

Tokelau

Identified gaps against industry training success factors in Tokelau:

- No skills development policy is being applied within Tokelau. As a self-administering territory of New Zealand, Tokelau could either create its own policies for skills development or adopt policy from New Zealand. Given the unique economic landscape in Tokelau, New Zealand's industry driven models will probably not be appropriate.
- USP is the only formal education provider in Tokelau aside from the three schools. This means that industry training provision is entirely informal. Developing an industry training system built in part on on-job learning would require some capacity building and recognition of the informal sector.
- The department of education in Tokelau establishes national standards and monitoring systems for education however these are limited to the school system; USP monitors itself as a regional provider. The capability for regulation and quality assurance for industry training would need to be established.
- No significant private construction activity is occurring within Tokelau; most activity is coordinated through government-managed working groups. Industry training models need to consider these groups as the monopoly employer and develop skills development standards and arrangements in close cooperation with them.
- There are few skilled tutors and trainers to support off-job and on-job training activities. USP has the potential to take up a distance provider role for the off-job provision, however, skilled trainers need to be provided or identified within the community working groups.
- Funding for skills development is largely through highly competitive scholarships that send learners overseas. The Government funds working groups but there are some inefficiencies in the resourcing of the groups. An example is that workers within the groups are paid similar rates, regardless of whether they possess the skills to perform the work. This creates a situation where a minority of workers perform most of the work and resources to some projects are overallocated. This stretches already limited working groups and budgets for skills development.
- Local skills needs are not tracked or monitored in a systematic way. Taupulega, who oversee the working groups, do not have the processes needed to track the groups' skills levels or map these against skill requirements. When implementing large or complex projects, the working groups contract workers from overseas to complete the work. The working groups will often still assist though there are no systematic means of transferring skills from visiting contractors to the local workforce either.

Tonga

Identified gaps against industry training success factors in Tonga:

- Tonga does not have dedicated skills formation policies that incorporate industry training models; however, the Education Act clearly mentions TVET and the definition of TVET includes apprenticeships and informal learning. This policy indicates what appears to be the

government's focus for skills development: skills acquisition through institutions. The policy does outline education institutions and employers and their roles in the design and delivery of programmes. This policy may be a good foundation for further system reform.

- Funding for providers is insufficient to sustain quality programmes. Providers are highly dependent on government grants though in many cases these are insufficient. Private providers, including church providers are particularly short of funds. They are also notably short of skilled trainers.
- There is a need for reliable data collection from education systems to inform workforce planning. The Ministry of Education has indicated that a major investment is underway that includes strengthening the ability to map skills supply and demand but information on progress is not currently available.
- There area lack of standard industry practices and agreements on what professional competence should be. The Tonga National Qualifications and Accreditation Board (TNQAB) are beginning to develop national competency-based qualifications in partnership with industry, however, progress has been slow. The number of construction programmes has also increased because multiple providers have submitted their own programmes for recognition. This has created inconsistencies in the standards of delivery between programmes in the sector. The Tonga building code is also poorly enforced, causing variations in the competence requirements for programmes.
- National qualifications have effective industry participation however it is unclear if this also happens for the design of other programmes in the sector. Further information is needed to validate this.

OPPORTUNITIES FOR INDUSTRY TRAINING IN THE PACIFIC CONSTRUCTION SECTOR

Stakeholder Perspectives on Regional Approaches to Skills Development

Regional cooperation in the Pacific has been described as a gateway to shared prosperity: The World Bank identifies regional cooperation in the Pacific as a cross-cutting issue that should be prioritised to unlock economic opportunities (The World Bank, 2017). Regional cooperation principles for our focus countries have been clearly outlined in some national strategies and implied in others. Further, there have been significant agreements within the region which foster closer partnership and a shared view of prosperity. A major example of this is the recent Pacific Agreement on Closer Economic Relations Plus (PACER+); a trade and labour mobility agreement between eleven Pacific Countries. There is a growing and real drive for cooperation in the region..

With industry training, regional cooperation could mean many things. It could mean:

- Sharing resources and capacity to sustain skills systems;
- Special migration provisions for learners from the region;
- Developing mutual systems such as quality assurance, skills frameworks, and financing mechanisms; and more.

When considering regional approaches, it is important to consider that industry training learners are embedded in workplaces. This means that when relocating workers for regional skills development opportunities, workers take skills out of the local economy and into another. Learners who migrate for the purposes of industry training must work. With unemployment generally high in the region, job availability within the local job market is an important issue for many local governments. Further,

governments in the Pacific need to consider retaining skilled workers to deepen their labour markets and capacity for growth. Though labour mobility can have significant positive impacts for PICs (Curtain, Dornan, Doyle, & Howes, 2017), regional cooperation initiatives will need to closely monitor local skills supply and demand to ensure that potential benefits are spread evenly across participating countries.

Most stakeholders in our field research reported strong positive attitudes overall toward the concept of regional cooperation for skills development. This attitude was consistent between government, industry, and training provider participants in the research. The most consistently reported benefits to regional approaches from stakeholders were that regional approaches may:

- Promote efficiencies in, and in some cases enable, industry training governance functions such as policy, funding, and regulation.
- Lift standards of practice in the industry.
- Lift standards of design, delivery, and management in education systems.
- Promote the sharing of knowledge, resource, equipment, and trainers.
- Enable delivery and access to programmes not otherwise viable or available locally.
- Increase the opportunities and labour mobility of their workforces.

Regional cooperation for skills development is already occurring in the Pacific. For example, USP, a regional university in the Pacific, has increased access to higher education for many learners throughout the Pacific through its network of campuses. Jointly owned by 12 Pacific governments, the institution has a presence in all these countries, including the more remote Tokelau. USP is centred around higher education not WBL, although it does have a TAFE division which provides skills-based training to local learners and employers. Its success demonstrates the effectiveness of regional cooperation.

Regional accreditation activities are also ongoing. In some countries, institutions have their own accreditation arrangements with countries such as New Zealand and Australia. More than this, SPC have established a Pacific Qualifications Framework (PQF) and Pacific Quality Assurance Framework (PQAF). These are high-quality regional quality assurance tools that are accessible to countries with less capacity to establish their own quality assurance systems.

There are also regional associations that are cooperating to develop the capabilities of local and regional workforces. The Pacific Power Association and the Pacific Water and Wastewater Association are intergovernmental organisations designed to promote cooperation within their disciplines in the region including training and upskilling for the regional workforce, sharing of expertise, and more. These associations are valuable as they deliver skills training that is not available locally and promote quality standards within these utilities sectors. It is likely that the essential status of these utilities sectors was a driving force behind their creation. With the construction sector having diverse cross-sectoral impacts on Pacific populations, there is a similar driving force to create a similar organisation for the construction sector.

Regional cooperation for skills development is a broad concept, though, these examples show that there is potential for regional cooperation to achieve greater outcomes for the Pacific workforces.

The main risks that were identified by stakeholders were:

- Local economies being unable to retain trained workers.
- The quality of local skills development systems being unequal which may lead to an inconsistent quality of outcomes between countries; and
- The capability and capacity of local industry training systems cannot support the level of training or the type of activities required across the region.

Participants in the research identified the highest risk as regional initiatives or programmes not taking local contexts into account. There were several examples in the research of international programmes being used in the Pacific with unnecessary or irrelevant content. For example, the inclusion of earthquake building standards rather than the more appropriate topic of climate change resilience. Even countries with seemingly similar labour markets can have industry or cultural differences that need to be accounted for in programmes. The key challenge for regional programmes would be incorporating any context-specific elements identified through local stakeholders and relevant within the wider regional context. Some stakeholders suggested that a set of common skills could be identified between countries and supplemented in each country through local units.

Another key perspective from stakeholders was that larger countries in regional agreements tended to dominate the conversation. While smaller countries are included, their needs tend to be secondary to larger countries. Regional cooperation initiatives would need to consider ways to involve all stakeholders and ensure the voices of smaller countries are heard and accounted for.

Regional approaches to skills development have potential and, in some ways, are being implemented now. Challenges may emerge surrounding the local relevance of standards and the movements of people between countries; however, stakeholders are very interested in the concept and in cooperating for greater shared prosperity.

Inclusion of Disadvantaged and Marginalised People in the Labour Market and Industry Training

This section presents a summary of stakeholder perspectives regarding inclusive industry training in the construction sector. However, to understand inclusiveness in our focus countries fully, it is important to consider each country's findings independently. Table 34 in Appendix 11 details the perspectives collected from stakeholders in our field research by country. These should be read alongside this section.

Stakeholders from the field research were, generally, in strong support of the inclusion of disadvantaged and marginalised learners in their local construction industries and construction skills training though many noted that much more needs to be done in this area.

Stakeholders from several countries reported that inclusiveness is new concept in the Pacific Islands. Inclusive education is seen as separate from the original designs of the education sectors in these countries, sectors that previously did not cater well for learners with special needs. They reported that in several countries, for industry training to be truly inclusive, work-based learning elements should be included and integrated within general education pathways from primary to tertiary levels. This establishes Work-based Learning as an equivalent and valuable learning option and has the added benefit of better preparing all learners for the world of work.

Developing guiding policies for the inclusion of disadvantaged and marginalised groups was reported to be a possible solution. However, in some cases, stakeholders reported that disadvantaged and marginalised groups were reflected in policy, but this did not necessarily translate into outcomes. A more holistic, participatory, and practical approach appears to be needed.

From what we could identify from the field research, Kiribati is a leader in inclusive vocational education. This is likely due to strong emphasis on inclusion in education from Australian donors to the sector. Other inclusive skills training successes were seen in limited places within the other focus countries. These were reported to be led by advocacy groups or education providers with intentions to increase access to disadvantaged and marginalised groups, or specific groups such as women. One challenge is that these groups often offer informal education to bypass access issues within the formal system. This delivers skills to disadvantaged and marginalised groups, however, still leaves them behind learners who have used the formal system. Skills recognition systems and inclusive industry training systems would be of great benefit so that these groups could also formalise their learning achievements.

All stakeholder groups from all focus countries indicated that they are open to inclusive principles. Traditional attitudes toward gender roles were commonly reported in the research, for example from Kiribati, Tokelau, and Tonga, however, the global education trend towards inclusivity (UNESCO, 2020) has influenced the Pacific and the construction sector within it. Stakeholders within these countries, particularly government and employer groups, are now more open to and aware of inclusion principles and priorities. Consultations with stakeholders in Tokelau identified unanimous support towards women in the construction sector, a change from traditional perspectives and structures of their construction working groups.

In contrast, one large employer stakeholder reported that, in some instances, women in the Solomon Islands who participated in the construction sector were experiencing gender-related violence from their partners. We have no information to quantify this point, however, it is still important to recognise this as an issue that needs closer attention. Future work will need to approach activities and interventions with the knowledge that high incidences of gender-based violence are seen through the Pacific (Pacific Women, 2021) and that woman moving out of traditional roles may be more vulnerable to gender-based violence.

It was commonly reported across countries that the participation of individuals with physical or intellectual disabilities in the construction sector would depend on the individuals' circumstances. Construction is a physically demanding sector and stakeholders, particularly employers, frequently reported uncertainty about the level to which individuals with physical disabilities would be able to participate. Several stakeholders reported concern regarding the participation of individuals with physical or intellectual disabilities in high-risk activities such as high-voltage electrical construction work. Stakeholders often stated that individuals who are unable to work safely in these circumstances should not participate in them. It appears that the nature of some activities in the construction sector are perceived to influence the ability of all groups to fully participate in them. An analysis of construction occupations and their entrance requirements is beyond the scope of this research, however, given the complexity and diversity of physical and intellectual disabilities, work will be needed to establish participation requirements for the construction sector for these groups.

Female participation in construction trades appears to be increasing in all countries, excluding Tokelau; the Tokelau government working groups are currently divided by sex and only the men's groups (Aumaga) are tasked with construction activities. As mentioned above though, there is strong support in Tokelau for the inclusion of women in construction activities. In one instance, it was noted that female participation was limited by gender roles: traditional construction activity in Kiribati is assigned by gender so women perform weaving tasks while men erect the building's structure. This was not necessarily the case in modern construction activities within Kiribati, though it speaks to the discussion needed if traditional construction methods are to be mainstreamed. Generally, employers were open to hiring women in all countries.

It was commonly reported that stakeholders frequently did not understand the needs of diverse groups such as individuals with disabilities and women. Employers, in some instances, reported that

they did not know what the requirements of working with diverse groups would be. Inclusive education and advocacy will be needed to bridge this gap. Some education providers also noted a limited capacity to provide training opportunities for marginalised groups such as individuals with disabilities. This was largely to do with the limited capacity for providing learning support staff.

In the case of the Kiribati Institute of Technology (KIT) for example, significant efforts have been put into creating an enabling environment for learners with disabilities. This is largely successful, although, difficulties in providing learners with interpreters who are knowledgeable in the subject constrain their ability to provide similar standards of education to groups with these needs. The supply of these specialists and other supports is dependent on the often narrow, local labour markets and limited resources within Pacific countries.

Special supports are needed to enable successful industry training for disadvantaged and marginalised learners, though, some stakeholders may also need to increase their understanding of the requirements of these groups and how to create successful outcomes for them. With strong stakeholder support for inclusive practices, there are opportunities to effectively integrate these principles into industry training models and activities.

Sustainable Pacific Industry Training Models: Local and Multi-Country Approaches

Types of Industry Training Systems that Emerged from the Research

The Pacific countries in this research share much in terms of WBL and Industry Training however they do have differences which are significant enough to require different approaches. By analysing the gaps and barriers identified in the previous sections we have identified three types of industry training systems which apply to the six PICs. These are listed in Table 5 below. It should however be noted that the categories have simplified some complex and unique local training systems and should be interpreted with local context in mind. They are not comprehensive for all industry training systems in the Pacific but do make comparisons between countries easier. The categories are:

Emerging Industry Training Systems

- Countries with emerging formal industry training systems but lacking the coordinated policy and regulation which would allow them to thrive.

Provider-led Training Systems

- Countries dominated by institutional WBL rather than industry training; workplace learning takes place, but industry do not lead the design of skills frameworks or the delivery of training.

Adaptive and Informal Training Systems

- Countries with rudimentary formal WBL systems and limited availability of formal training generally limited to secondary school level. Reliant on the informal sector for industry skills formation.

Table 5: Types of Industry Training Systems and Focus Countries allocated to each.

Emerging Industry Training Systems	Provider-led Training Systems	Adaptive and Informal Training Systems
Solomon Islands Tonga	Cook Islands Kiribati	Niue Tokelau

Emerging Industry Training Systems

The Solomon Islands and Tonga align with the first category, Emerging Industry Training Systems. These countries have established some features of effective industry training systems, but these are not being implemented to their full potential.

The Solomon Islands have implemented industry training for some time through their national apprenticeship scheme. With the Establishment of SITESA, the Solomon Islands WBL system, now has unified funding and regulatory functions; however, there are still legacy regulation and monitoring functions being performed by MCILI. This has caused some confusion in coordination. The Solomon Islands has many system-level features that establish a foundation of quality industry training, though, these are not being coordinated or integrated as effectively as they could be.

Tonga's skills delivery system is predominantly driven by institutional providers, though, a leading provider, Tonga Institute of Science and Technology (TIST), is incorporating some elements of dual training, and the TNQAB is beginning to create national competency-based standards and programmes. These factors suggest that Tonga is integrating WBL into its education system and creating the systems for industry to define their expected graduate outcomes. However, few national standards and qualifications have been established. Tonga has the beginnings of a national qualifications system that would support industry training programmes; however, reformers need to think about how to build on this foundation. This includes how to improve the integration of employers and other stakeholders into well-structured and supported industry training models, potentially including apprenticeships and WBL with significant workplace learning and assessment components.

Provider-led Training Systems

The next category, Provider-led Training Systems, includes the Cook Islands and Kiribati. While these countries have some features of industry training systems, and both have formal WBL providers, they lack the effective systems and capabilities for managing some features of industry training.

The Cook Islands government operates CITTI: the sole formal WBL provider in the Cook Islands. The size of the Cook Islands is likely too small to facilitate multiple WBL providers in the same industry. Consequently, CITTI acts as a gatekeeper to formal WBL in the Cook Islands. Education and development policy and strategy for the Cook Islands reinforces the essential part CITTI must play in the future educational and economic development of the country. The strategy documents refer to plans for an apprenticeship scheme to be developed soon, and apprenticeships are currently being tested in the hospitality and tourism sector, however, industry involvement in the design and delivery of courses at CITTI is low.

Kiribati has more than a single WBL provider, however, KIT is the only provider of construction training; the others are focused on Maritime and Teacher Training. Programmes at KIT frequently involve workplace attachments, however their structure is not outcomes based. Mechanisms also exist within KIT to receive industry inputs for design of their programmes, but these perspectives are often not considered. KIT's engagement with industry does not promote industry-led course specification or design.

These smaller PICs have the advantage of focused and flexible provision. With a single, or few, dominant training providers it is easier to oversee and develop formal training provision. In fact, for both the Cooks and Kiribati, the main construction skills provider is a subsidiary of government. Industry training provision in these systems is lagging, primarily due to a focus on formal training providers and, other goals such as increasing access to this formal training being prioritised over industry training.

Adaptive and Informal Training Systems

The last category, Adaptive and Informal Training Systems, includes Niue and Tokelau. Both PICs lack the scale to build sustainable WBL systems and rely instead on a combination of local flexible secondary level provision, the informal sector, and sending key workers to offshore providers.

Niue has no formal WBL providers apart from the local secondary school, Niue High School. In the absence of tertiary WBL providers, Niue High School has taken on some responsibility for skills delivery by offering WBL certificates in construction skills. Without higher-level WBL provision in Niue, skills delivery is largely based on informal and non-formal learning through employer in-house experience and training.

Tokelau is in a similar position. No tertiary WBL is occurring in Tokelau, and no secondary school WBL pathways are offered. The latter was trialled but could not be maintained due to a lack of skilled trainers. Informal learning in the construction industry is also complicated by the arrangements of the local construction working groups. The working groups do not consistently or systematically provide skills training to their members, and skills formation can exclude women as skills are traditionally passed down father to son. This has the effect of blocking the entry of women and younger more skilled workers in general into the industrial training system.

Emerging Factors

Broadly speaking, three factors have been identified which underpin the classification of the three types of industry training systems described above, these being listed in Table 6 below.

Table 6: Factors Underpinning the Nature of Skills Training Systems in the Pacific.

Factor	Limited	Sufficient
1. Availability of resources for development	Economy is too small to support Formal WBL. Burden of cost falls on families and individuals.	Local economy supports investment in WBL. Government can & does support student loan systems.

Factor	Limited	Sufficient
	Employers too small/ marginal to support formal training. Informal sector is dominant in skills formation.	Employers have resources and capacity to deliver required training. Labour market has the depth to support skills diversity.
2. Status and capacity of Industry Training systems	Few or no existing Industry Training systems and capability. Employer voice lacking or disorganised. WBL models are based on formal education concepts.	Has Industry Training systems and legacies on which to build. Employers are organised and can drive the skills agenda. WBL models are based on dual training concepts.
3. Approach to Skills Formation	Supply driven: • Policy focus is on formal education and capacity. • Formal learning providers dominate WBL provision. • Learners and families drive demand. • Employers seen primarily as consumers of skills.	Demand driven: • Policy focus encompasses employment and skills. • Dual training seen as a core model of WBL. • Employers and labour market needs drive demand. • Employers seen as integral to skills formation.

These factors are a way of developing strategy for building Industry Training capacity within the PICs and provide a series of themes for national and regional interventions. Factor one, 'availability of resources for development' will generally be the factor which suggests a national or regional strategy if it is low resource, PICs will require support through regional networks and aid transfers in the long term. The other factors model the movement to a mature Industry Training system as set out in the chapter covering models of Industry Training (p.42). Successful models of industry training are supported by factors from these systems.

Types of Training Systems and their Development Priorities for Industry Training Models

The three types of training systems and three factors discussed above have implications for the types of interventions which would suit each of the training systems. These are presented as discussion points in Table 7 below.

Table 7: Conclusions for types of industry training systems and their priorities to develop or maintain sustainable industry training models.

Model of Industry Training	Status for each Factor	Development Priorities
Emerging Industry Training Systems	**Factor One: Availability of Resources** - Some local investment in WBL, impact reduced by poor coordination and policy implementation. - Solomons government exploring student loan system. Local banks provide commercial loans. Tonga government does not. - Some large employers. - Labour markets have some depth, construction industry increased by incoming investment. **Factor Two: Status and capacity of Industry Training** - Have formal TVET providers, and basic industry training features. poor coordination and governance. - Employers' industry associations have potential to provide focus to industry perspectives. - Formal providers are primary providers of Skills based learning, potential for dual training system implementation is there. **Factor Three: Approach to Skills Formation** - Some policy focuses on skills formation, implementation issues	**Policy and Coordination** 1. Development of industry training policy built around dual training models. 2. Engagement with key stakeholders to agree policy and implementation priorities. 3. Clearer and better resourced governance arrangements. **Regulation** 4. Capability building for regulatory bodies around dual learning systems and concepts. 5. Implementation of effective monitoring and evaluation systems and capabilities. 6. Extension of regulatory support and oversight into informal learning systems. **Workforce Development** 7. Support for industry training qualifications built around dual training concepts. 8. Effective skills monitoring systems. 9. Employer involvement in qualification design. **Financing** 10. Extension of student loan schemes to industry training.

	- Formal learning providers dominate, but employers do undertake industry training on their own account - Employers are driving demand for skills formation which is still dominated by formal providers. - Some issues around industry standardisation.	11. Investment planning for providers. **Delivery** 12. Enabling of industry training systems – on-job learning and assessment
Provider Led IT Systems	**Factor One: Availability of Resources** - Smaller PICs – have provider-based systems which are dependent to some degree on external support. - Narrow provider base – Limited offerings. - Providers need to be flexible as narrow base precludes specialisation. **Factor Two: Status and capacity of Industry Training** - Have formal TVET providers. Suffer from poor coordination and governance. - Provider voice is dominant, often have close association with ministries of education. - Formal providers are primary providers of Skills based learning, industry voice is weak or not listened to. **Factor Three: Approach to Skills Formation** - Providers lead on skills formation. - Provider Industry engagement weak. - Employers look to alternatives as providers often lack the capacity for competence-based learning and assessment.	**Policy and Coordination** 1. These PICs understand dual training systems but need support in implementing and capacitating on-job learning and assessment. **Regulation** 2. Capability building for regulatory bodies around dual learning systems and concepts. 3. Implementation/ capacitation of effective monitoring and evaluation systems and capabilities. **Workforce Development** 4. Develop simple labour market information nationally and regionally. 5. Engage employers more effectively in framework and qualification design. 6. Draw on regional qualification and assessment networks to support and expand local provision. **Financing** 7. Support local families, groups and communities through targeted scholarships and grants. 8. Investment planning for providers. **Delivery** 9. Link into regional dual training frameworks and systems. 10. Potential to bring external providers in to deliver online and blended learning elements.

Adaptive and Informal IT Systems	**Factor One: Availability of Resources** - Smallest PICs, limited by low opportunity, poor scalability of provision. - Single providers if at all, secondary education primary source of provision. - Stakeholders need to be flexible and access training opportunities locally and overseas as needed. **Factor Two: Status and capacity of Industry Training** - Education ministries demonstrate flexibility and access industry training where they can find it. - Industry training is generally based on informal sector. - Sustainability a real issue as resources are severely limited and unlikely to grow sufficiently over time to support fully fledged industry training. **Factor Three: Approach to Skills Formation** - merge informal sector and blended learning around key skills. - Some resistance to do industry training offshore as people will often migrate for better opportunities. - Local cultural factors are key, respond to traditional gender roles and expectations with sensitivity.	**Policy and Coordination** 1. Work with local education ministries to develop flexible regional WBL and IT policies. 2. Bring community and informal sector perspectives formally into policy formation and evaluation. **Regulation** 3. Link into regional dual training frameworks and systems. 4. Bring regulatory expertise (local provision, implementation of regional and local programmes) into provide oversight and advice. **Workforce Development** 5. Identify local skills development needs to align local and regional modular programmes and qualifications. **Financing** 6. Support for locally relevant skills-based training, accepting dependency in the longer term. **Delivery** 7. Support and build on new technologies (satellite comms, online learning, MOOCs etc.) to build flexible blended learning solutions in the PICs.

Industry Training Models in these Types of Systems

The conclusions from Table 7 above are a starting point for wider discussions with PICs about their needs for implementing industry training models, however, there are implications that are immediately evident.

Despite the complexity of the situation that PICs face in developing their labour markets and the industry training models, they have potential local and cross-country opportunities to implement effective industry training models. A combination of local and regional industry training approaches, some already being used in one way or another, can provide these types of training systems in the Pacific with viable solutions to their skills development challenges over time.

Industry training refers to a broad and relatively consistent model of learning but adapts to accommodate different circumstances. The different types of training systems identified above have different needs, which means they require different approaches to industry training. Emerging industry training systems, provider-led training systems, and adaptive and informal training systems are at different stages of industry training implementation and have different capacities and strengths. Importantly, all these types of training systems need to allow for local circumstances and work with current capacity and strengths. Working to the strengths of local systems is the best way to ensure the efficiency, and therefore sustainability, of industry training models. This is also the most effective method to overcome some of the barriers due to lack of scale.

Emerging industry training systems have the potential to develop successful industry training models with the structure and policy direction mostly in place. Greater resources and labour market size also mean that local training systems may be more sustainable in these types of systems than other PICs. Given these factors, a local and integrated model of industry training, such as that described in the 'Models of Industry Training' section, is likely to be achievable in this context. This would involve strengthening the institutions and supports that are in place and addressing other development priorities from Table 7. These training systems have the potential to provide effective examples for less developed training systems and to serve as regional supports, if needed, to PICs with fewer resources.

Provider-led training systems can extend their focused and flexible off-job systems to integrate with on-job learning provision. A narrow base of formal providers in these countries requires flexibility in their delivery to meet training needs, however, capacity is frequently stretched. These providers are yet to take full advantage of the training capacity that employers in their countries could provide using industry training models. Centralised industry training may be effective in these contexts with providers using their educational expertise to facilitate and guide employer engagement. In these systems, particularly because the main providers are government operated, there is the potential for key education providers to extend into coordination roles that drive demand-side training: industry training.

With moderate labour market size, there is potential for local industry training to be sustainable. It is possible that regional integration will be required for some features of the training system to achieve the efficiencies needed to sustain programmes over time.

Adaptive and informal training systems can create effective industry training but must establish their capability and build flexibility into their skills delivery system. As there are few instances of formal WBL delivery in these training systems and little resource available to establish these, flexibility is key to successful implementation of industry training models. Regional approaches to skills development may be necessary to overcome barriers due to scale however local capacity will be needed to ensure local relevance and coordination of training. The systematic Identification of skills demands will be critical to understanding whether local labour markets can

support training over the long term. It is likely that flexible, lifelong-learning approaches to industry training may provide better opportunities for skills development and recognition as training opportunities may take place over more years than a programme would typically require. Modular industry training programmes and qualifications that build on/use scalable types of learning, such as blended learning, may be useful in these settings.

To develop successful industry training models, all three types of training systems need to strengthen their policy, regulation, and workforce development functions. These functions are critical to the efficiency, sustainability, and effectiveness of delivering industry training. Currently, gaps exist across all types of training systems in these areas to different levels. There is an opportunity to consider regional approaches when strengthening these functions, particularly in areas such as:

- The coordination and sharing of training opportunities and the support of industry training infrastructure and capability.
- Skills framework development and coordination to meet local needs but provide opportunities for regional skills development and labour mobility.
- Quality assurance of delivery and participation, with a focus on recognising training provider flexibility and mobility within the region.
- Regional skills planning that supports both regional and local decision making.

There is a potential to apply industry training in the Pacific to address the skills supply challenges that currently exist in the construction sector. Implementation plans need to address local context but also the regional implications of training. Many PICs have strong foundations from which to build from. There is a strong interest from all types of stakeholders in applying modern WBL and industry training systems in the Pacific construction sector, and some initiatives are underway s that will contribute to the successful implementation of industry training.

The identification of success factors in this research may provide a useful starting point for stakeholders to evaluate their own industry training systems in more depth and identify actions to take. However, to see the best results, the approach used to establish or strengthen industry training models in the Pacific needs to be sensitive to unique local contexts, to value the involvement of local stakeholders, and to work to the strengths and capabilities of current systems.

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APPENDICES

APPENDIX 1: POPULATION PYRAMIDS FOR FOCUS COUNTRIES: COOK ISLANDS, KIRIBATI, NIUE, SOLOMON ISLANDS, TOKELAU, AND TONGA

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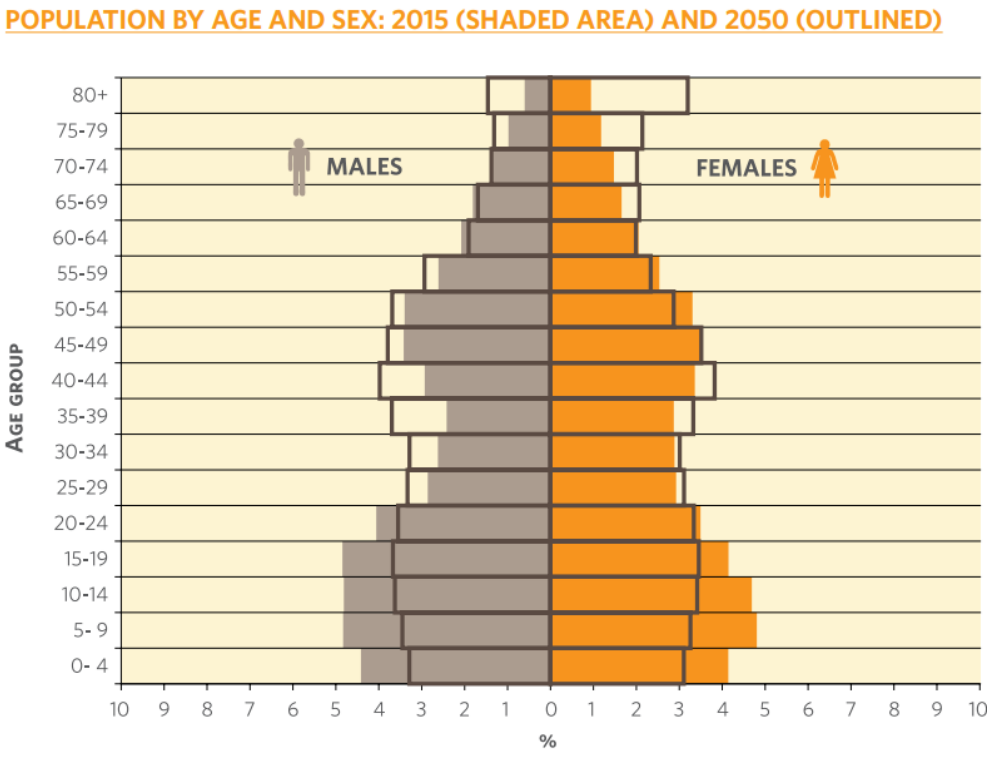
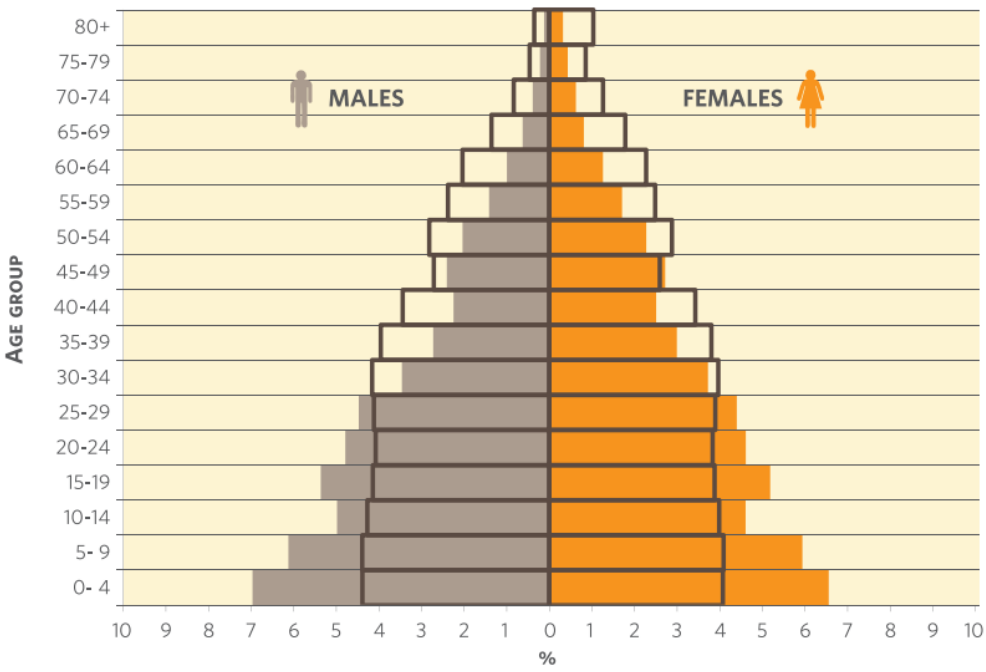
Table 8: Population Pyramids and expected growth to 2050 in focus countries: Cook Islands, Kiribati, Niue, Solomon Islands, Tokelau, and Tonga.
Source: Population and Development Profiles: Pacific Island Countries. (United Nations Population Fund, 2014).

Cook Islands



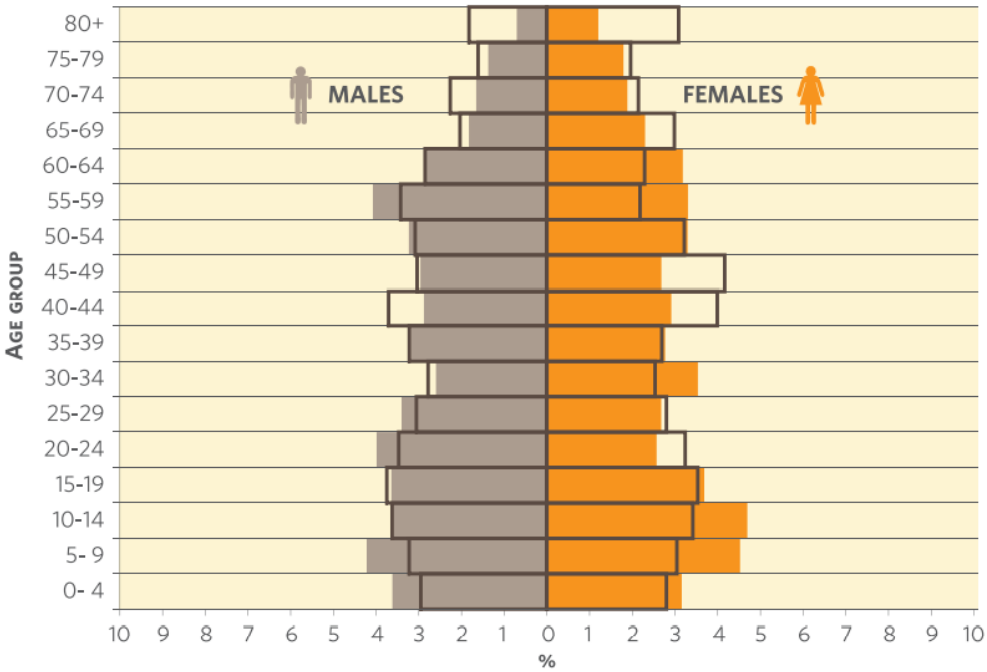
Kiribati

POPULATION BY AGE AND SEX: 2015 (SHADED AREA) AND 2050 (OUTLINED)



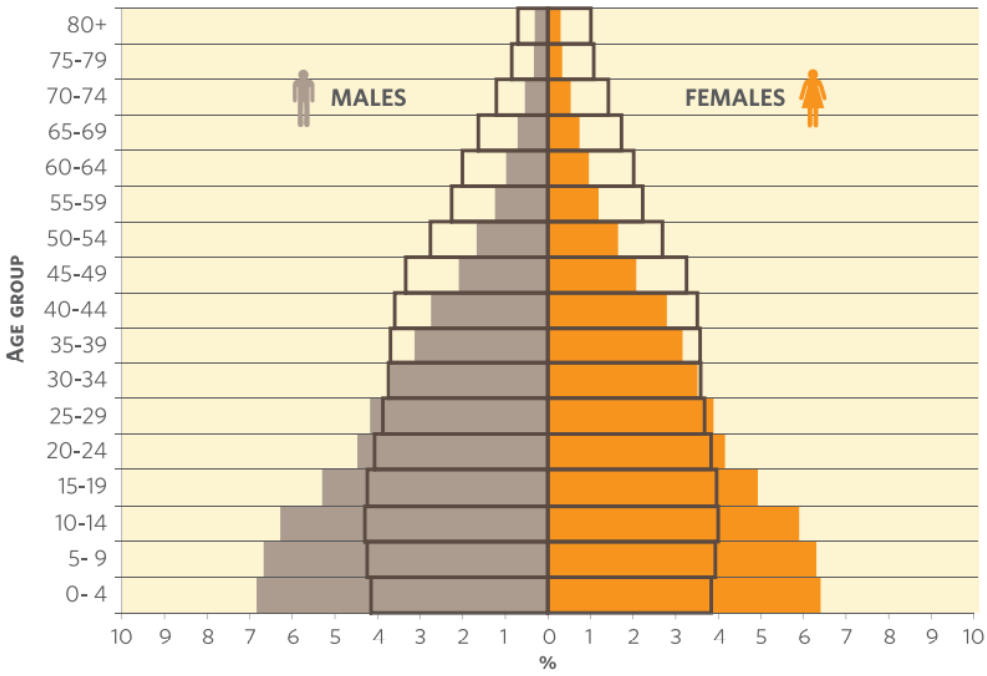
Niue

POPULATION BY AGE AND SEX: 2015 (SHADED AREA) AND 2050 (OUTLINED)



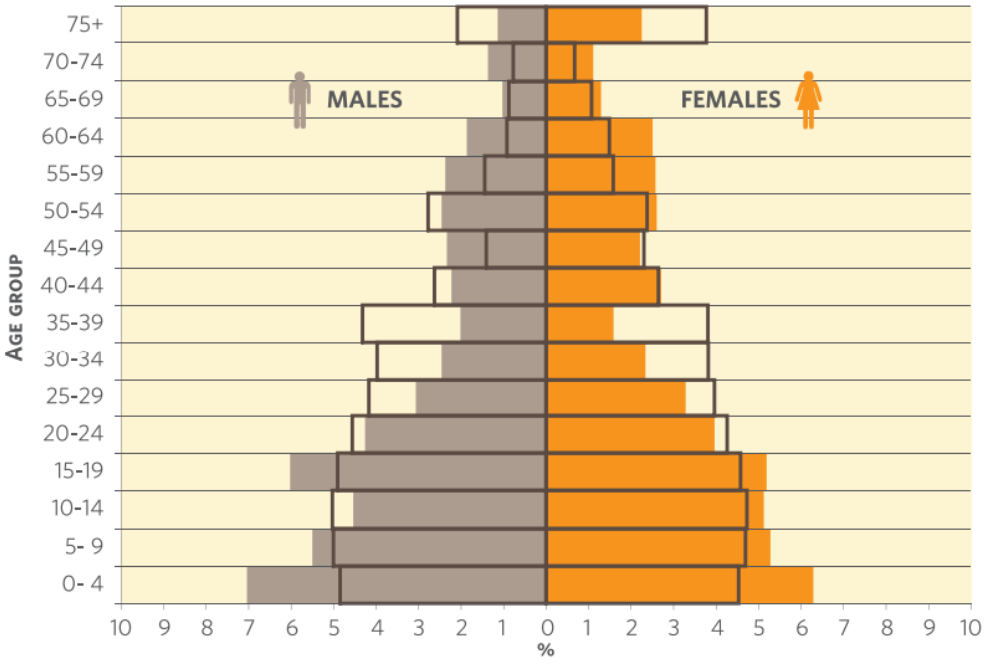
Solomon Islands

POPULATION BY AGE AND SEX: 2015 (SHADED AREA) AND 2050 (OUTLINED)



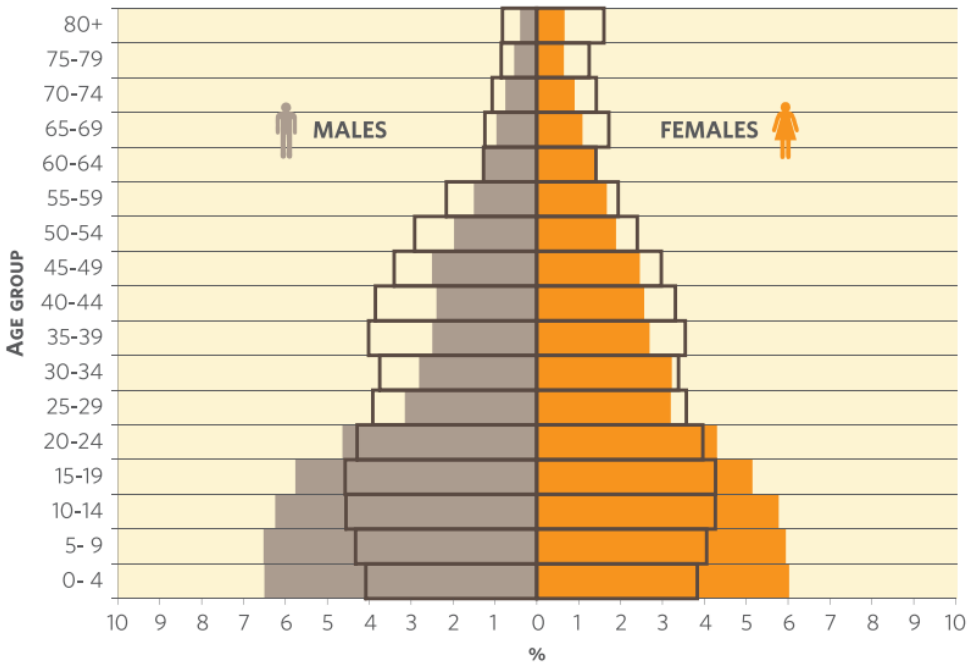
Tokelau

POPULATION BY AGE AND SEX: 2015 (SHADED AREA) AND 2050 (OUTLINED)



Tonga

POPULATION BY AGE AND SEX: 2015 (SHADED AREA) AND 2050 (OUTLINED)



Appendix 2: Labour Market Breakdowns for our Focus Countries from most recent Census

Cook Islands Labour Force and Construction Industry Size

Table 9 in Appendix 2 and Figure 9 below show the Cook Islands labour market broken down by Industry and Sex from the 2016 census. The total labour force was 7,443 in 2016; 3,899 Male and 5,433 Female. The restaurants and accommodation industry had the largest labour force, followed by wholesale and retail trade and public administration.

Within this, 438 individuals were employed in the construction industry. There was a significant gender split with 412 males and 26 females employed in 2016. More recent total employment numbers are available in the Cook Islands 2019 Labour Force Survey (Cook Islands Statistics Office, Cook Islands Government, 2020) however, this report does not have a sex breakdown of employment by industry.

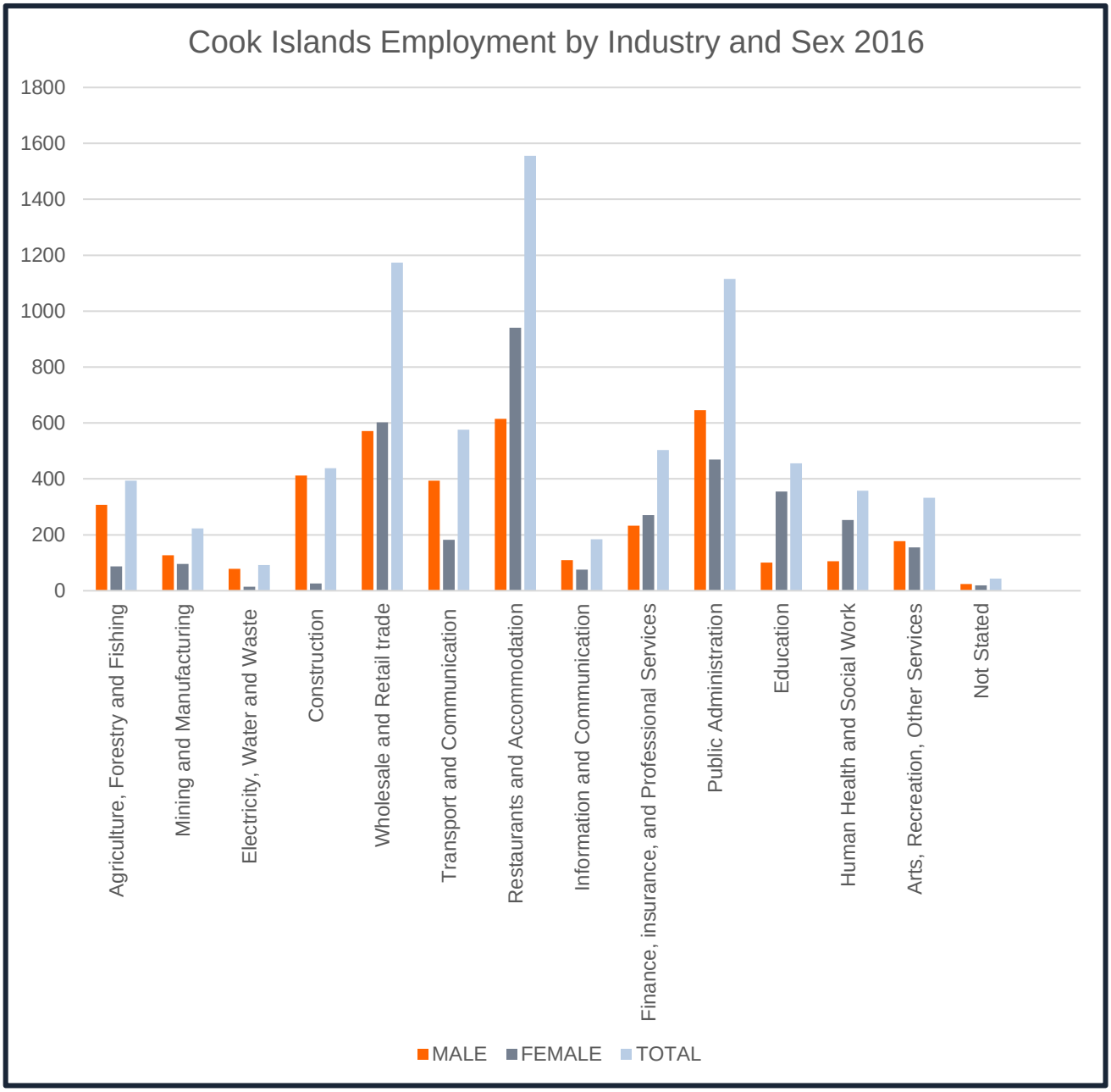


Figure 9: Cook Islands Formal Sector Employment by Industry and Sex, 2016.
Source: Cook Islands Population Census Report 2016, (Cook Islands Statistics Office, 2018)

Kiribati Labour Force and Construction Industry Size

Table 11 in Appendix 2 and Figure 10 below present the Kiribati labour force in 2015 broken down by industry and sex. Industries with high employment were Agriculture; Manufacturing; Public Administration; and Wholesale and Retail Trade. Importantly, Fishing is left out of the Agriculture category in this assessment. The total labour force in 2015 was 28,158; 16,191 male and 11967 female.

846 individuals were employed in the construction sector in 2015 with a significant gender split: 784 male and 62 female. Further, Table 12 in Appendix 2 shows the construction labour force by area of employment: Formal, Private, Public, Electrical, Sewerage, and Other construction. The dominant construction areas were formal and private construction by a large margin.

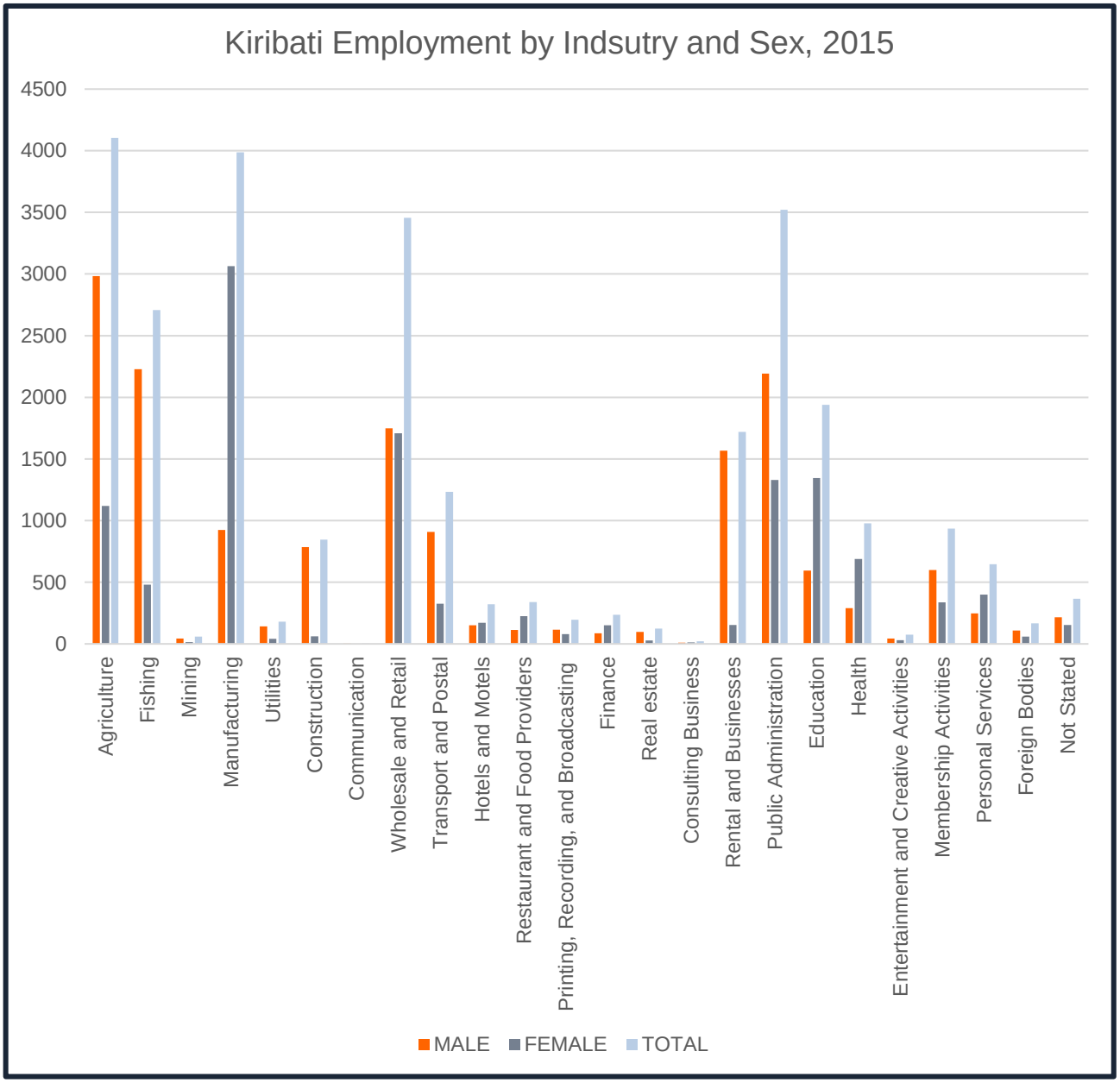


Figure 10: Kiribati Employment by Industry and Sex, 2015.
Source: 2015 Population and Housing Census. (Ministry of Finance National Statistics Office, 2016)

Niue Labour Force and Construction Industry Size

Table 13 in Appendix X and Figure 11 below present the labour force by industry and sex as a percentage of the total labour force in 2017. Industries with the largest labour forces were Administrative and Support Services; Public Administration and Defence; and Wholesale and Retail Trade.

The entire labour force in Niue in 2017 was 785 (Statistics and Immigration office, Government of Niue, 2019). The construction labour force comprised 13.1% of the total labour force; 12.8% of the total labour force in construction were males and 0.3% were females. This is a significant gender gap.

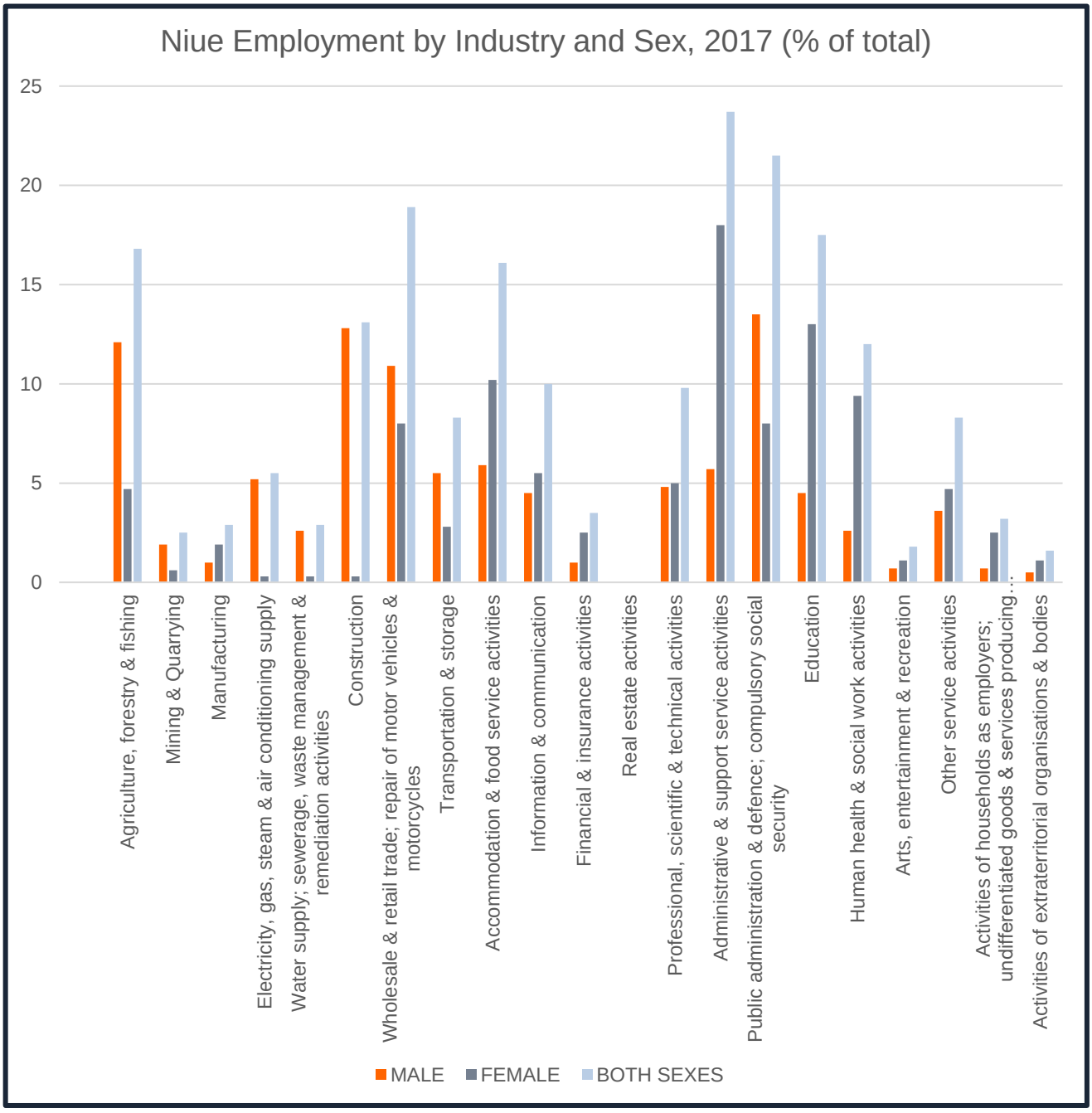


Figure 11: Niue Employment by Industry and Sex, 2017.
Source: Niue Household and Population Census 2017. (Statistics and Immigration office, Government of Niue, 2019)

Solomon Islands Labour Force and Construction Industry Size

Table 14 in Appendix 2 and Figure 12 below present Solomon Islands employment by Industry and Sex in 2009. It should be noted that the results of the 2019 Solomon Island census are due to be released in the last quarter of 2021 that will provide more accurate figures. Significant industries by employment number were Agriculture; Wholesale and Retail Trade; and Education.

Total employment in Construction in 2009 was 4979; 4884 male and 95 female; another large gender imbalance.

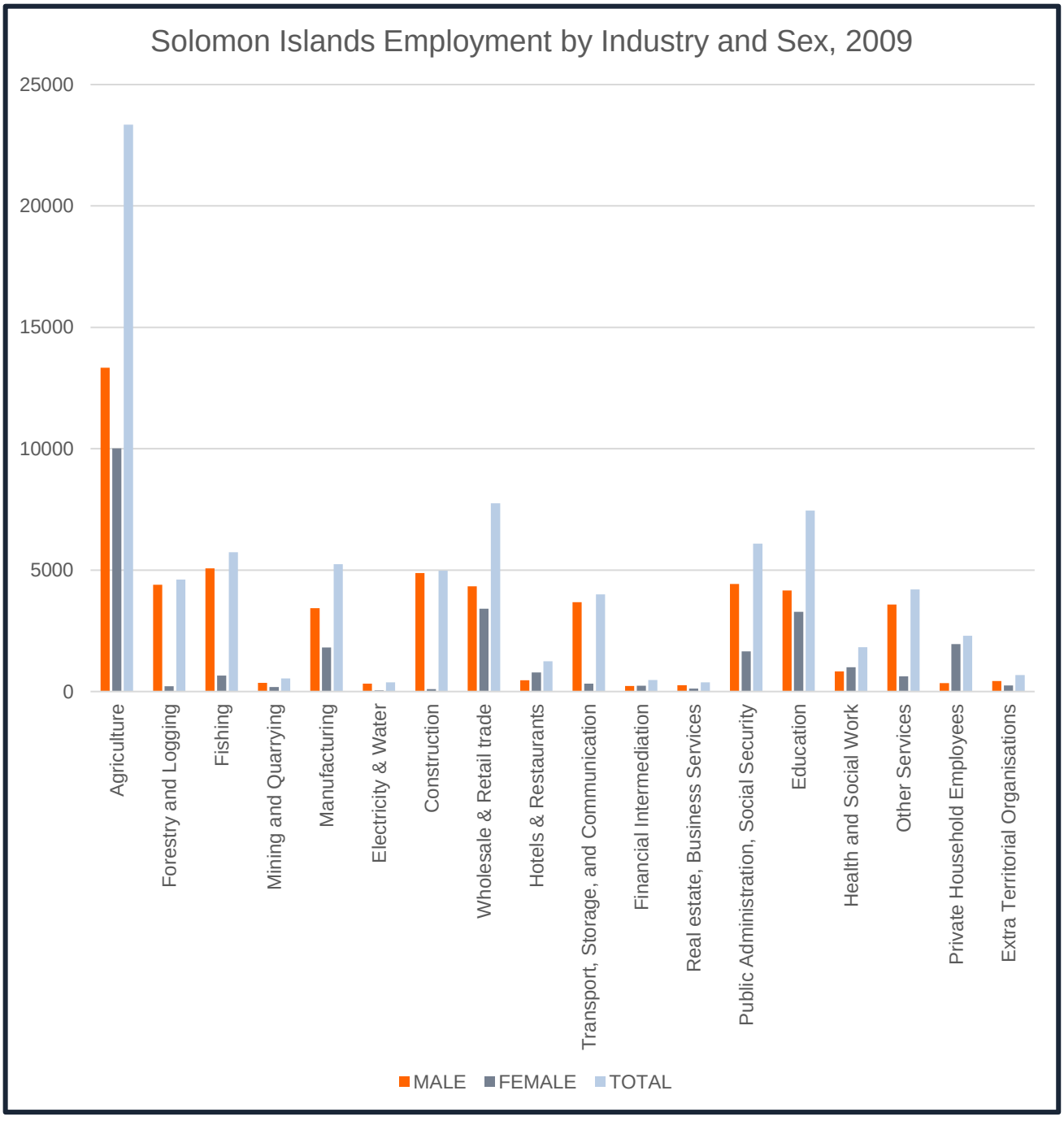


Figure 12: Solomon Islands Employment by Industry and Sex, 2009.
Source: 2009 Population and Housing Census: Report on Economic Activity and Labour Force. (Solomon Islands National Statistical Office, Ministry of Finance and Treasury, 2009)

Tokelau Labour Force and Construction Industry Size

Table 15 in Appendix 2 and Figure 13 below present Tokelau employment by occupational area and sex in 2016. Significant Occupational areas were Labourers, agriculture, and fisheries workers; Professionals; and Technicians and trades workers. It should be noted that Tokelau has a unique classification of employment due to the large public employment sector and small population; Figure 16 in Appendix 2 shows the labour force model for Tokelau.

Technicians and trade workers in this occupational classification include mechanics, plumbers, builders, cooks/bakers, electricians, or power workers. There were 60 employed in this classification in 2016; 57 male and 3 female.

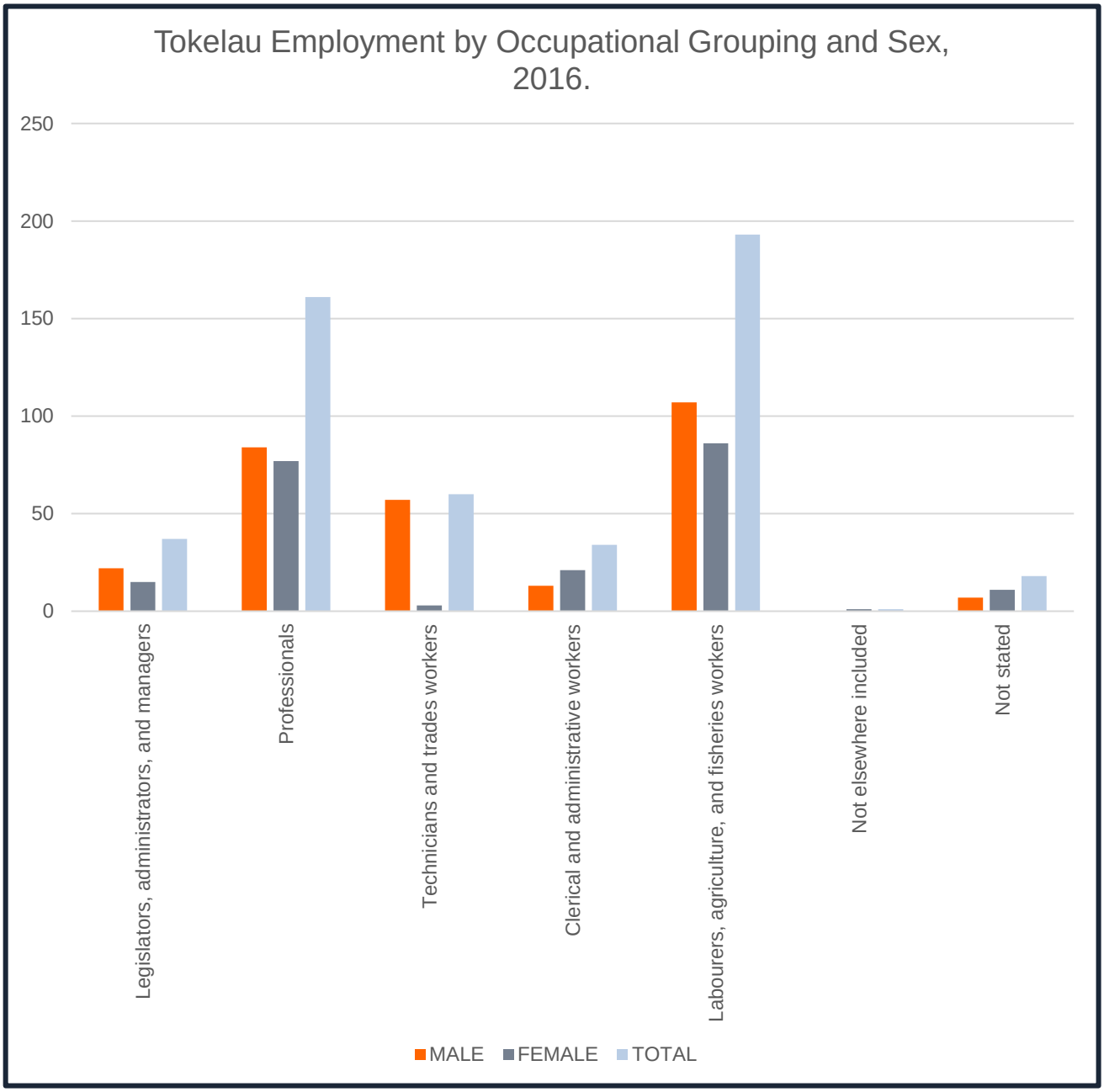


Figure 13: Tokelau Employment by Occupational Grouping and Sex, 2016.
Source: Profile of Tokelau, 2016 Tokelau Census of Population and Buildings. (Tokelau National Statistics Office, Office of the Council for the Ongoing Government of Tokelau, 2016)

Tonga Labour Force and Construction Industry Size

Table 16 in Appendix 2 and Figure 14 below present Tongan employment by industry and sex in 2016. Significant industries by employment number are Agriculture, forestry, and fishing; Manufacturing; and Public Administration and Defence. Construction was a significant industry in terms of employment number; however, the Agriculture and Manufacturing sectors were significantly higher than other sectors.

The total labour force in 2016 was 33,503; 20,043 male and 13,460 female. The construction labour force in 2016 was 2,236; 2,170 male and 66 female, a significant gender gap.

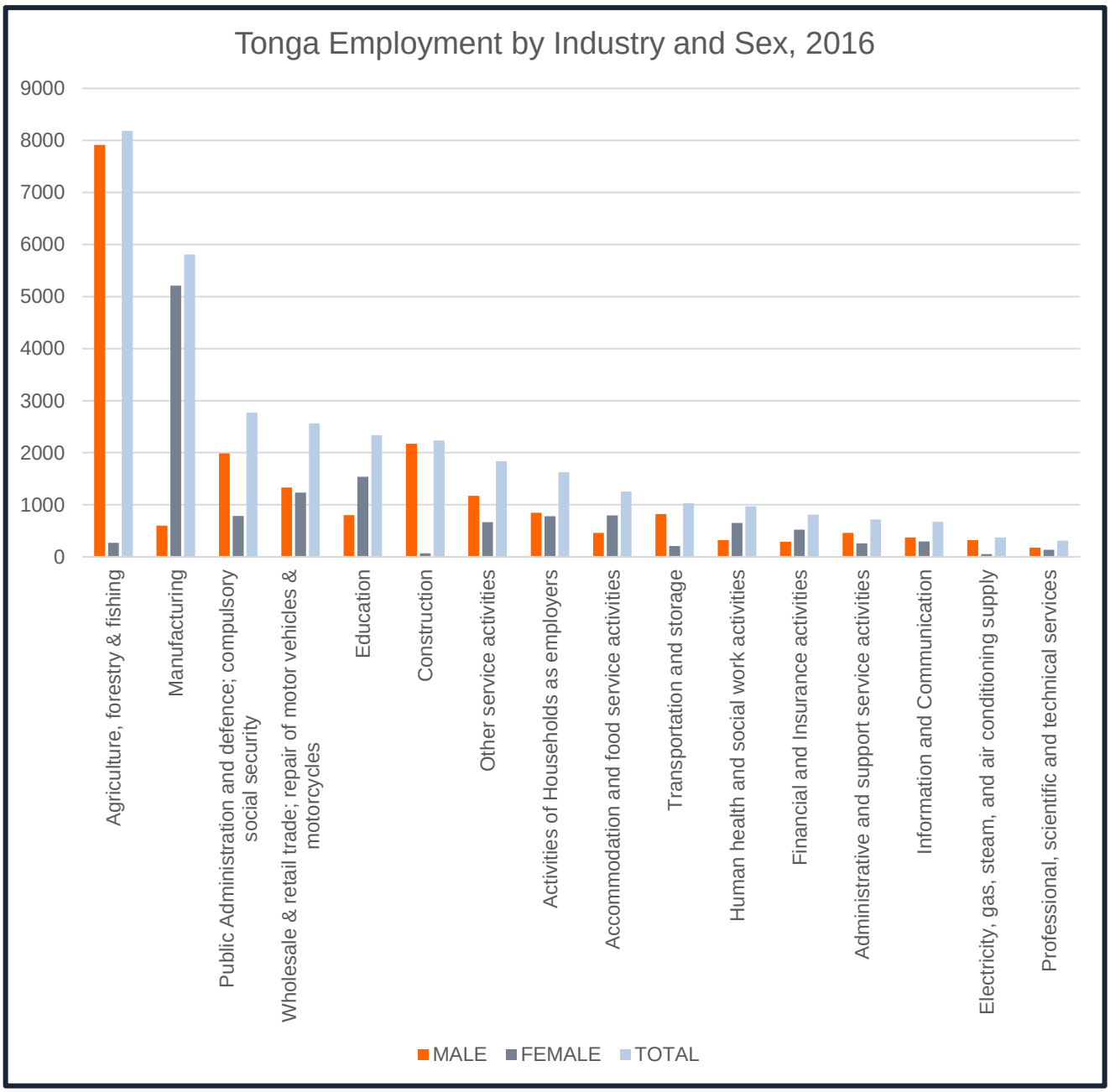


Figure 14: Tonga Employment by Industry and Sex, 2016.
Source: Tonga 2016 Census of Population and Housing, Volume 2: Analytical report. (Tonga Statistics Department, 2019)

Table 9: Cook Islands Employment by Industry and sex, 2016.
Source: Cook Islands Population Census Report 2016, (Cook Islands Statistics Office, 2018).

COOK ISLANDS			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Agriculture, Forestry and Fishing	307	87	394
Mining and Manufacturing	127	96	223
Electricity, Water and Waste	78	14	92
Construction	412	26	438
Wholesale and Retail trade	571	602	1173
Transport and Communication	394	182	576
Restaurants and Accommodation	615	941	1556
Information and Communication	109	75	184
Finance, insurance, and Professional Services	233	270	503
Public Administration	646	469	1115
Education	101	355	456
Human Health and Social Work	105	253	358
Arts, Recreation, Other Services	177	155	332
Not Stated	24	19	43
TOTAL	3899	3544	7443

Table 10: Cook Islands Construction Sector Employment by Occupation, 2019.
Source: Cook Islands Labour Force Survey 2019 Report. (Cook Islands Statistics Office, Cook Islands Government, 2020).

COOK ISLANDS	
OCCUPTION	**TOTAL EMPLOYMENT**
Manager	28
Professionals	12
Technicians and associate professionals	0
Clerical support workers	8

COOK ISLANDS	
OCCUPTION	**TOTAL EMPLOYMENT**
Service and sales workers	0
Skilled agricultural, forestry and fishery workers	0
Craft and related trades workers	214
Plant and machine operators and assemblers	51
Elementary occupations	100
TOTAL	413

Table 11: Kiribati Employment by Industry and Sex, 2015.
Source: 2015 Population and Housing Census. (Ministry of Finance National Statistics Office, 2016).

KIRIBATI			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Agriculture	2984	1119	4103
Fishing	2228	480	2708
Mining	44	15	59
Manufacturing	924	3063	3987
Utilities	141	40	181
Construction	784	62	846
Communication	2	0	2
Wholesale and Retail	1749	1708	3457
Transport and Postal	908	325	1233
Hotels and Motels	150	171	321
Restaurant and Food Providers	113	225	338
Printing, Recording, and Broadcasting	116	79	195
Finance	86	151	237

KIRIBATI			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Real estate	97	27	124
Consulting Business	10	11	21
Rental and Businesses	1567	153	1720
Public Administration	2192	1329	3521
Education	595	1345	1940
Health	289	688	977
Entertainment and Creative Activities	44	30	74
Membership Activities	598	337	935
Personal Services	247	399	646
Foreign Bodies	108	58	166
Not Stated	215	152	367
Total	16191	11967	28158

Table 12: Kiribati Employment by Construction Area and Sex, 2015.
Source: 2015 Population and Housing Census. (Ministry of Finance National Statistics Office, 2016).

KIRIBATI			
Construction Occupations	**MALE**	**FEMALE**	**TOTAL**
Formal Construction	379	35	414
Private Construction	321	15	336
Public Construction	12	1	13
Electrical Construction	2	0	2
Sewerage Construction	7	0	7
Other Construction	63	11	74
TOTAL	784	62	846

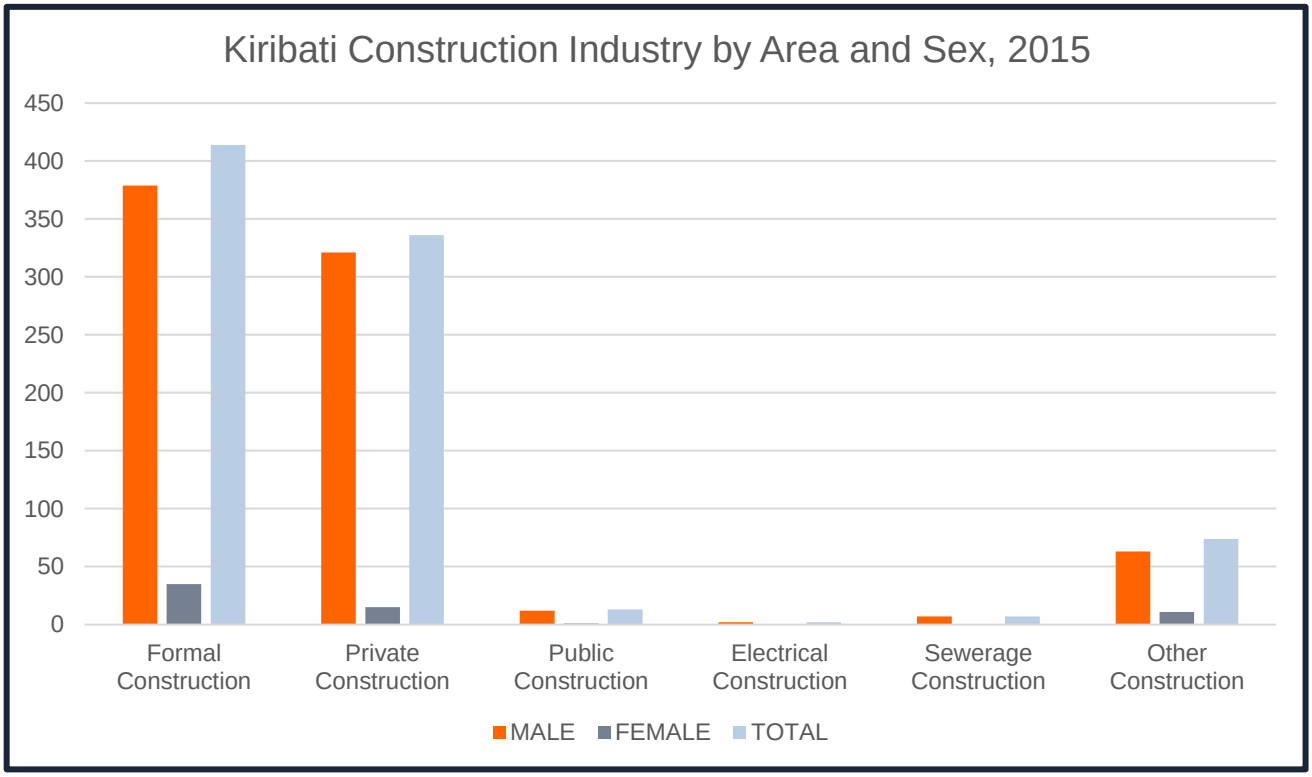


Figure 15: Kiribati Construction Industry by Area and Sex, 2015.
Source: 2015 Population and Housing Census. (Ministry of Finance National Statistics Office, 2016)

Table 13: Niue Employment by Industry and Sex, 2017.
Source: Niue Household and Population Census 2017. (Statistics and Immigration office, Government of Niue, 2019).

NIUE			
INDUSTRY	**MALE (% of total labour force)**	**FEMALE (% of total labour force)**	**BOTH SEXES (% of total labour force)**
Agriculture, forestry & fishing	12.1	4.7	16.8
Mining & Quarrying	1.9	0.6	2.5
Manufacturing	1	1.9	2.9
Electricity, gas, steam & air conditioning supply	5.2	0.3	5.5
Water supply; sewerage, waste management & remediation activities	2.6	0.3	2.9
Construction	12.8	0.3	13.1
Wholesale & retail trade; repair of motor vehicles & motorcycles	10.9	8	18.9
Transportation & storage	5.5	2.8	8.3

NIUE			
INDUSTRY	**MALE (% of total labour force)**	**FEMALE (% of total labour force)**	**BOTH SEXES (% of total labour force)**
Accommodation & food service activities	5.9	10.2	16.1
Information & communication	4.5	5.5	10
Financial & insurance activities	1	2.5	3.5
Real estate activities	0	0	0
Professional, scientific & technical activities	4.8	5	9.8
Administrative & support service activities	5.7	18	23.7
Public administration & defence; compulsory social security	13.5	8	21.5
Education	4.5	13	17.5
Human health & social work activities	2.6	9.4	12
Arts, entertainment & recreation	0.7	1.1	1.8
Other service activities	3.6	4.7	8.3
Activities of households as employers; undifferentiated goods & services producing activities of households for own use	0.7	2.5	3.2
Activities of extraterritorial organisations & bodies	0.5	1.1	1.6
Total	100	100	100

Table 14: Solomon Islands Employment by Industry and Sex, 2009.
Source: 2009 Population and Housing Census: Report on Economic Activity and Labour Force. (Solomon Islands National Statistical Office, Ministry of Finance and Treasury, 2009).

SOLOMON ISLANDS			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Agriculture	13336	10010	23346
Forestry and Logging	4395	216	4611
Fishing	5076	660	5736

SOLOMON ISLANDS			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Mining and Quarrying	353	190	543
Manufacturing	3432	1810	5242
Electricity & Water	330	47	377
Construction	4884	95	4979
Wholesale & Retail trade	4335	3417	7752
Hotels & Restaurants	463	781	1244
Transport, Storage, and Communication	3682	321	4003
Financial Intermediation	232	240	472
Real estate, Business Services	266	118	384
Public Administration, Social Security	4433	1659	6092
Education	4165	3284	7449
Health and Social Work	831	995	1826
Other Services	3581	629	4210
Private Household Employees	346	1951	2297
Extra Territorial Organisations	431	246	677
Total	54571	26669	81240

Table 15: Tokelau Employment by Occupational Grouping and Sex, 2016.
Source: Profile of Tokelau, 2016 Tokelau Census of Population and Buildings. (Tokelau National Statistics Office, Office of the Council for the Ongoing Government of Tokelau, 2016).

TOKELAU			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Legislators, administrators, and managers	22	15	37
Professionals	84	77	161
Technicians and trades workers	57	3	60
Clerical and administrative workers	13	21	34

TOKELAU			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Labourers, agriculture, and fisheries workers	107	86	193
Not elsewhere included	0	1	1
Not stated	7	11	18
Total	290	214	504

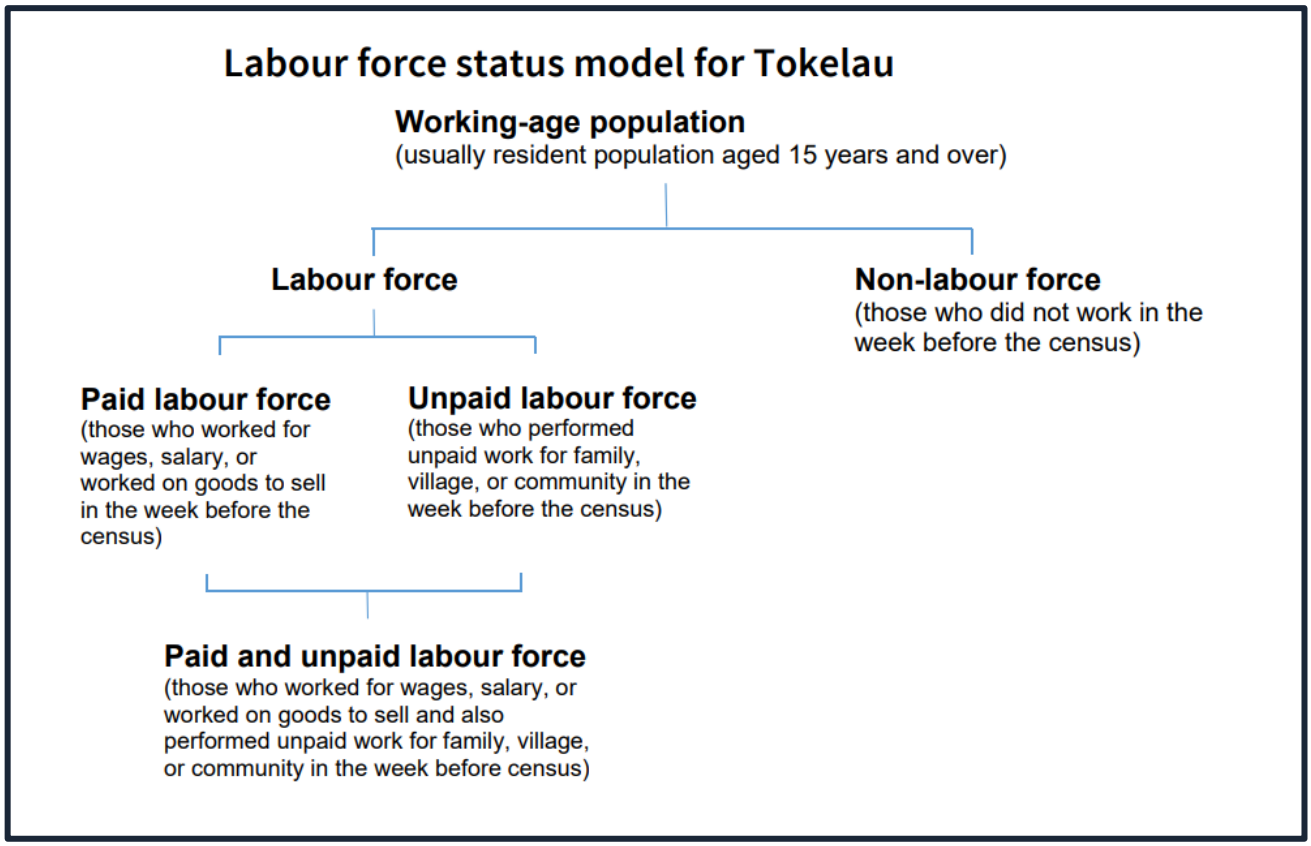


Figure 16: Tokelau Labour Force model.
Source: Profile of Tokelau, 2016 Tokelau Census of Population and Buildings. (Tokelau National Statistics Office, Office of the Council for the Ongoing Government of Tokelau, 2016).

Table 16: Tonga Employment by Industry and Sex, 2016.
Source: Tonga 2016 Census of Population and Housing, Volume 2: Analytical report. (Tonga Statistics Department, 2019).

TONGA			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Agriculture, forestry & fishing	7914	268	8182

TONGA			
INDUSTRY	**MALE**	**FEMALE**	**TOTAL**
Manufacturing	599	5209	5808
Public Administration and defence; compulsory social security	1987	784	2771
Wholesale & retail trade; repair of motor vehicles & motorcycles	1331	1234	2565
Education	801	1539	2340
Construction	2170	66	2236
Other service activities	1171	665	1836
Activities of Households as employers	849	779	1628
Accommodation and food service activities	462	793	1255
Transportation and storage	823	206	1029
Human health and social work activities	321	651	972
Financial and Insurance activities	290	520	810
Administrative and support service activities	458	261	719
Information and Communication	374	296	670
Electricity, gas, steam, and air conditioning supply	318	52	370
Professional, scientific, and technical services	175	137	312
Total	20043	13460	33503

Appendix 3: Presentation of International Models of Success for Industry training systems

System Level Success Factors

An effective framework for system level success factors is the *Ten essential building blocks of an effective TVET system* from the *Taking a whole of government approach to skills development* UNESCO report (UNESCO, 2018). These building blocks were developed out of a review of other critical and foundational requirements for TVET systems. This framework is one of the few intergovernmental agency-provided frameworks for foundational system requirements; it is of significant relevance to this analysis.

The ten building blocks in this model are provided in Table 17 below.

Table 17:Ten essential building blocks of an effective TVET system.
Source: Taking a whole of government approach to skills development, (UNESCO, 2018).

Building Blocks	Description and Justification
Leadership and clarity of purpose across policy domains	The government's aims and objectives for TVET and skills development are clear and widely understood in government and among key stakeholders. All stakeholders have a clear understanding of what they need to do to contribute to these aims. The cross-policy domain relevance of skills to national and subnational policy objectives is clearly stated
Labour market relevance and demand-driven provision	TVET provision is responsive to the needs of the labour market. The local labour market is sufficiently developed to view skills as an essential component in improving productivity and competitiveness. Employers are willing to pay for training and are satisfied that the training and qualifications on offer are producing workers with skills that will enhance their business.
Well-functioning partnerships and networks promoting access and equity	TVET provision and learning opportunities are available to all who want to access them regardless of ethnicity, gender, age, social status or disability. Social partners (including civil society organisations) are actively engaged in TVET delivery, and work to ensure equality of access across the system. The existence of well-managed college/industry partnerships and recognition of non-formal learning and RPL further enhance access and opportunities
High-performing, quality training institutions	Training institutions (public and private) have the capacity, staffing, equipment and facilities to deliver high-quality training which meets the expectations of employers and learners. Institutions provide high-quality student support services, have strong connections to their local labour market, and use these linkages to offer work-based learning opportunities and to improve the quality and relevance of their training.

	Institutions are gender-aware and are led by teams with strong leadership skills and an entrepreneurial approach.
Standardised QA mechanisms and portability of qualifications	Qualifications are widely recognised as being an accurate and trustworthy proxy for the actual skills and competencies of the bearer. Qualifications allow the bearer to choose from a number of high-quality recognised learning routes and progression pathways. Opportunities for continuing learning and progression exist for those who have been in employment for many years as well as new entrants to the labour market. QA systems ensure high-quality training or remedial measures where necessary.
Stable and sustained financing	The TVET system is adequately financed to enable it to achieve anticipated outcomes. This financing is stable so that stakeholders can have the confidence to forward plan. Funding is directed towards priority areas, and performance-based incentives are in place to achieve positive outcomes. Funding comes from diverse sources, which reduces over-reliance on a single source and enhances stakeholder engagement and ownership.
Well-functioning institutions, incentives, and accountability mechanisms	Institutions across the TVET system work effectively to transmit national policy priorities into deliverable activities. Incentives and related accountability and transparency measures are in place for training providers (both public and private). In addition to institutions, incentives also need to be in place for individuals so that people (including the poor) feel able to invest time and scarce resources in acquiring skills.
Public esteem, strong graduation, and employment rates	The TVET system is recognised by stakeholders and the general public as producing successful outcomes which lead to the attainment of valuable qualifications and sustainable employment with higher wage returns than unskilled workers. This success attracts more (and better qualified) learners to consider TVET options and encourages more employers to work with the TVET system. Training is provided for workers in the informal sector and for the self-employed as well as formal sector employees
Availability of accurate data and information including Labour Market Information	Monitoring, reporting and evaluation systems are in place so that policy-makers, stakeholders and members of the public are able to access accurate and timely information regarding progress against TVET and skills development activities, outputs and outcomes. This information should include performance information on training providers (both public and private) which is readily available for the public, employers and prospective learners. Data and information are collected, analysed and used to influence decision-making. They are sufficiently disaggregated to be meaningful for sectoral and subnational planning and decision-making. Without accurate and comprehensive LMI it will be very difficult to develop a training supply system which has labour market relevance and is demand-driven.

Culture of policy learning and continuous improvement	Government and TVET stakeholders display a willingness to challenge existing assumptions and continuously learn and improve on existing interventions. This involves both attitudes and the establishment of mechanisms to support the gathering and dissemination of information and research from a range of sources that might not traditionally have played a central role in the policy-making process. A culture should include mechanisms for evaluating the impact of TVET policy and programmes and examining the prospects for scaling up pilot and innovation projects as well as academic research. It should encourage interaction, collaboration and reflection so that TVET is implemented in a dynamic rather than static environment

This model broadly covers the activities of all stakeholders within an industry training system. Though it is framed around TVET systems, TVET is an underpinning concept behind industry training and the success factors are closely related: the term TVET is often used interchangeably with WBL. Still, success factors for industry training specifically could have subtle differences or emphases due to the refined focus.

The Commonwealth[1], a voluntary association of 54 independent countries, provides its own key features of an effective TVET system through a *Technical and Vocational Education and Training (TVET) Self-Assessment Toolkit* (The Commonwealth, 2017). This work centres around creating a self-assessment tool for evaluating TVET systems, though part of this work involved a review of TVET effectiveness which produced six key features of an effective TVET system. These key features and their key elements are given below:

Table 18: Six Key Features of an Effective TVET system.
Source: Technical and Vocational Education and Training (TVET) Self-Assessment Toolkit, (The Commonwealth, 2017).

Key Feature	Key Elements
Governance	• Defined roles and responsibilities • Policies and Funding for skills development • Access and equity policies
Employer Engagement	• Determining skill priorities • Curriculum development • Workforce training • Support for the TVET sector
Occupational Standards	• Competency-based curriculum • Recognition of existing skills and knowledge
Qualifications Framework	• Framework • Recognition and articulation

[1] The Commonwealth is supported by intergovernmental, civil, cultural, and professional organisations within its member countries and comprises, centrally, three intergovernmental organisations: The Commonwealth Secretariat, The Commonwealth Foundation, and The Commonwealth of Learning.

Quality Institutions	• National standards • Registration process • Data collection and analysis
Delivery & Assessment	• Teachers/Trainers • Flexible delivery • Student support services • Teaching and assessment guidelines • Validation and moderation processes

The features in this framework are somewhat distinct in this list of similar frameworks as they are designed to be evaluated against, therefore, they breakdown the features into evaluable elements. Where the UNESCO framework above might mention, for example, quality institutions as being essential to the system, the Commonwealth framework extends this: it further suggests the presence of national standards, registration processes for institutions, and data collection and analyses from these institutions predicts success.

Another, similar system level framework is the *Key Building Blocks for Quality Apprenticeships* by the ILO (ILO, 2017). This framework establishes the key foundations to quality apprenticeships; the dominant mode of learning within both WBL and industry training. The modern apprenticeship is the mode of learning most commonly imagined when discussing industry training. The framework was created through the analysis of good and effective practices from ILO constituents around the world and comprises 6 factors described below and seen in Figure 17:

Figure 17: Building Blocks of Quality Apprenticeship Systems.
Source: ILO Toolkit for Quality Apprenticeships. Volume 1: A Guide for Policy Makers, (ILO, 2017).

Table 19: Building Blocks of Quality Apprenticeship Systems.
Source: ILO Toolkit for Quality Apprenticeships. Volume 1: A Guide for Policy Makers, (ILO, 2017).

Key Feature	Description and Justification
Meaningful social dialogue	• Quality Apprenticeships form a bridge between the world of education and the world of work, based on social dialogue involving the social partners – employers and their associations and trade unions, who are best placed to identify the training that is needed and the way that it should be provided.
Robust regulatory framework	• Quality Apprenticeships require a robust and stable regulatory framework, which establishes the overall conditions for designing and implementing systems and secures decent work for apprentices.
Clear roles and responsibilities	• Quality Apprenticeships are built on the support and commitment of numerous stakeholders who have a clear understanding of their roles and responsibilities. They also have a common purpose, which ensures the coherence of the entire system.

Equitable funding arrangements	• Quality Apprenticeships generate both costs and benefits for the public authorities, employers and apprentices themselves. There must be a clear overall understanding that costs are shared equitably to ensure that all stakeholders are willing to participate on a long-term basis.
Strong labour market relevance	• Quality Apprenticeships prepare young people for occupations and their participation in the labour market. This implies that employers and apprentices must know which occupations and skills are in demand, and how these skills will be recognised.
Inclusiveness	• Quality Apprenticeships are not just designed for one social group. If they are to offer opportunities for all, there is a need to take positive action to increase diversity, improve reporting and accountability, incorporate a level of flexibility and enhance advice and support.

Strong similarities are present between this ILO framework and the UNESCO and Commonwealth frameworks despite being concerned with slightly different concepts: apprenticeships and TVET respectively.

Another framework of success factors for apprenticeships is given in the *OECD note on "Quality Apprenticeships" for the G20 task force on employment, 2012* (OECD, 2012). In this, key features of quality apprenticeship programmes are outlined within the context of youth engagement. Engaging youth in industry training will be crucial to the success of industry training initiatives due to their young, and growing, populations (Wilson, 2020). The key recommendations from this quality apprenticeships framework are seen in Table 20 below.

Table 20: Key Features of Quality Apprenticeships.
Source: OECD note on "Quality Apprenticeships" for the G20 task force on employment, (OECD, 2012).

Key Recommendations
1. Not limiting provision and funding to specific age groups;
2. Facilitating participation by disadvantaged youth;
3. Including a strong formal training component;
4. Providing training that is not too narrowly focused;
5. Covering multiple sectors and occupations and encouraging the participation of women;
6. Involving an equitable sharing of costs (employers, government and apprentices);
7. Using competency-based rather than time-based progression and completion;
8. Preventing misuse of apprentices as cheap labour;

9. Joint management by the social partners (employers, government and labour); and
10. Programmes which are certified and well-integrated with the formal education system.

This framework identifies aims that managers of apprenticeship systems should consider. This model extends the ILO quality apprenticeships model by including elements that recognise common problems with apprenticeship systems. Such as the recommendation that apprenticeships should span multiple sectors and not be confined by traditional trades; explicitly mentioning the use of competency-based rather than time-based progression; and that apprentices should not be used as cheap labour.

Programme Level Success Factors

The first framework of programme success factors that we present is from a USAID commissioned, 2-year, 20 country study on best practices and TVET performed by Monika Aring and Cathleen Corbitt, *Compass to Workforce Development: A toolkit for policymakers, donors, governments, NGOs, and practitioners* (USAID, 1996). This review was designed to formulate principles which could be evaluated against and be useable to stakeholders. The key principles of successful TVET programmes they identified were:

Table 21: Key Principles of Successful TVET Programmes.
Source: Compass to Workforce Development: A toolkit for policymakers, donors, governments, NGOs, and practitioners. (USAID, 1996).

Key Feature	Description and Justification
Leadership and Accountability	• The underlying philosophies, values, and strategies that drive the design, implementation, and evaluation of a TVET program must be defined and communicated to all partners and stakeholders
Demand-driven design	• TVET programs can only be successful if they are tightly aligned to local, regional, national, and/or international economies and if the flow of information between stakeholders is open and transparent.
Open Access	• Barriers to entry—including information and practices that provide access—must be low enough to ensure that populations who have traditionally been excluded from education and training programs, such as women, girls, the disabled, and other marginalised groups, are able to participate and gain skills for employability.
Portable Skills	• Successful workforce development projects should allow for geographic mobility, as jobs or work opportunities may not be physically close to where learners have acquired skills and knowledge. Additionally, because work changes over time and workers change jobs and occupations over their lifetimes,

	transferable skills and soft skills, such as learning how to learn, plan, and communicate, are in great demand.
Continuous Improvement	• A commitment to continuous improvement encourages TVET programs to measure and evaluate students and programs throughout the process to ensure the quality of training and links to the labour market.
Public-Private Partnerships	• A key success factor for effective workforce development systems is the degree to which the program links the demand side of the labour market (employers or entrepreneurs) with the supply side (learners). Developing multiple partnerships that bring together resources from the private and the public sectors appears to be the most sustainable approach for workforce development initiatives.
Sustainable Financing	• If TVET programs are to continue to innovate, change, expand, and reach their goals, it is crucial that they be linked to multiple and flexible financing sources
Replicability	• It is important to identify the factors that influence successful and sustainable replication, such as alignment to national needs, social mores, and labour laws, if programs are to serve as models for providing and delivering training.
Economic and Social Impact of the Program or System	• Successful TVET programs benefit not just the individual but contribute, in varying degrees, to economic growth and democratic processes.

The last system level framework that we analysed in this research is contained within the *Principles and Strategies of a Successful TVET Program* developed by the Management and Training Corporation Institute (MTC) (MTC, 2010). This corporate research agency put together this framework to describe the key principles of effective TVET programmes from their experiences working in vocational training internationally. The top six principles they identify are:

Table 22: Principles and Strategies of a Successful TVET Program.
Source: Principles and Strategies of a Successful TVET Program, *(MTC, 2010)*.

Key Principles
1. Relevance to the labour market
2. Access for trainees
3. Quality of delivery
4. Standardisation
5. Inclusion of soft skills

6. Funding for the system is secure and uninterrupted

Success Factors for Inclusive WBL

The most comprehensive framework of success factors for inclusive TVET systems is the *ILO Guide on making TVET and skills development inclusive for all*, *2020* (ILO, 2020). This guide covers several suggestions and approaches, however in this context we are focused on the *Building Blocks of Inclusive TVET Systems*. The building blocks are seen below in Figure 18 and the strategies and success factors within these building blocks are provided in Table 23 below.

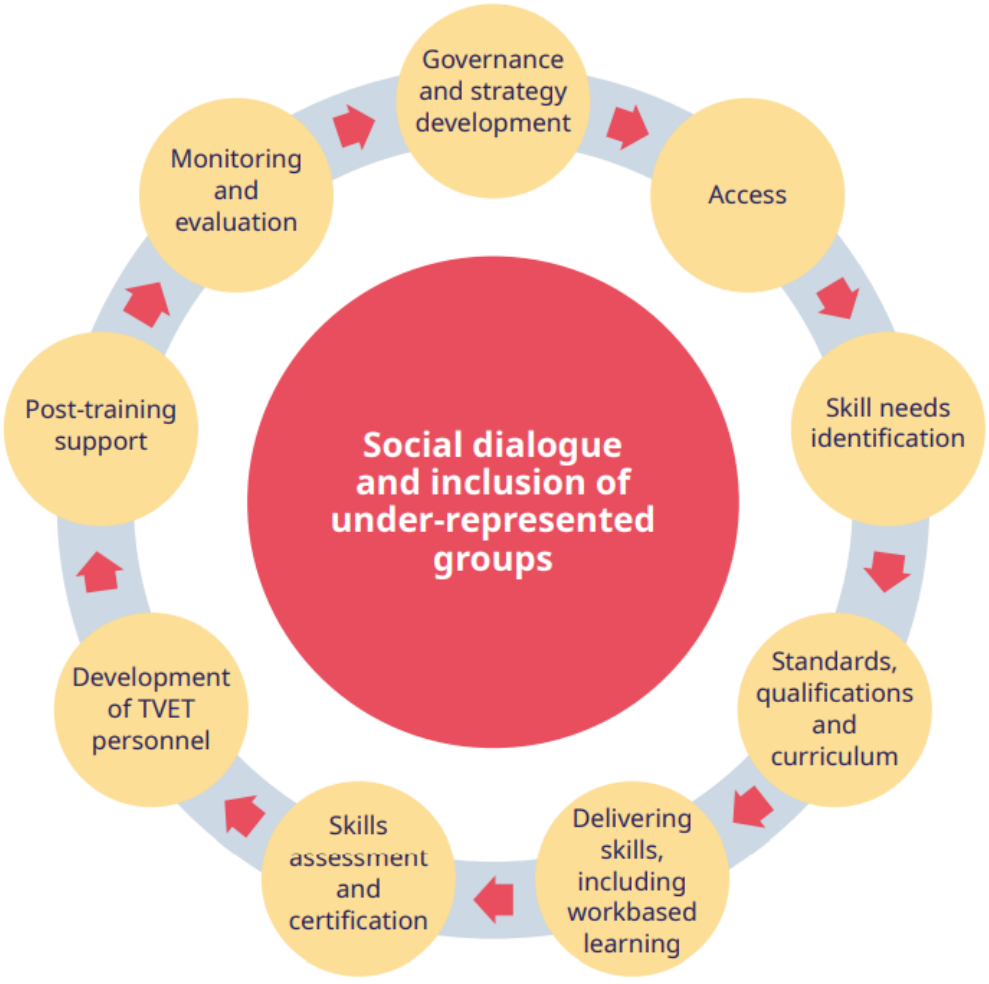


Figure 18: Building Blocks of Inclusive TVET Systems.
Source: ILO Guide on making TVET and skills development inclusive for all, (ILO, 2020).

Table 23: Building Blocks of Inclusive TVET Systems.
Source: ILO Guide on making TVET and skills development inclusive for all, (ILO, 2020).

Building blocks	Success Factors

Governance and strategy development	• Engage a broad spectrum of key stakeholders in TVET system development. • Include workers' and employers' organisations in tripartite governance or in tripartite-plus mechanisms along with other relevant state and non-state actors. • Ensure representation of under-represented groups in TVET governance boards or committees. • Non-profit organisations should not be limited to their role as service providers but should be encouraged to actively engage in policy formulation processes. • Implementation of capacity building measures for inclusion capabilities in government and other stakeholder departments. • TVET systems should allow/facilitate movement of learners from lower to higher TVET qualification levels. • When assessment structures are decentralised, they have adequate outreach to rural districts (e.g. mobile assessment centres, using local enterprises for assessment). • Costs of assessment and certification are affordable by the poor. • Assessment is made accessible to groups that tend to be excluded (persons with disabilities, etc.).
Access	• Career guidance and other awareness-building measures regarding TVET should include parents. • Social marketing needs to use the most appropriate channels, adapted to the local context, from social media, TV and radio to direct interaction with target groups. • Involve communities in the promotion of inclusion. • Digital and social media applications can include marketing of TVET programmes, facilitation of networks among graduates and peer counselling. Virtual reality tours embedded in vocational orientation can provide insights into professions and occupations. • Showcase examples of good inclusion practices from change makers. • Implement complaint mechanisms which allow trainees to report issues in confidentiality. • Separate sanitary facilities for girls and boys should be enforced as a minimum standard for accreditation of TVET institutions. • Application of universal design principles should be followed when constructing new TVET centres. • Consultation with persons with disabilities should be undertaken in the design of programmes. • Provision of childcare facilities within TVET facilities and programmes.
Skill needs identification	• Involve under-represented groups in skill needs analysis, and interpretation of research findings.

	• Investment decisions for new courses or the adaptation of existing courses should be undertaken with a view to redress existing inequalities in access and participation.
Standards, qualifications, and curriculum	• Training needs of excluded groups are identified and reflected in the design of curricula and learning material. • Training processes are sufficiently flexible in order to accommodate slow learners or cater to people already working or with care responsibilities. • Provision of non-formal bridging courses that enable individuals to enrol in mainstream formal programmes after successful completion of the course. • Core soft skills for employability need to be integrated into the training design/ curriculum. • Learning materials should depict learners from all societal groups.
Delivering skills, including work-based learning	• Management support and resources to implement learner-centred methods. • Pedagogical training of teachers in learner-centred approaches. • Smaller class sizes for learner-centred pedagogy. • Mixing groups of learners in delivery. • Local governments should recognise the role TVET institutions can play for community development and provide support through financial and non-financial means. • TVET management should be supportive to open their institutions to a wide constituency. • Ministries and TVET governing bodies can benefit from supporting the multi-purpose use of TVET institutions and facilities, e.g. by providing accreditation and funding for adult learning or other non-formal programmes. • TVET institutions act as a link between school and the local labour market. • Creation of clusters can connect more specialised, higher-level institutions offering diverse TVET programmes with a number of outreach or feeder institutions. While the latter offers basic level TVET courses, graduates can be referred to lead cluster institutions for higher and specialised qualifications. Such a system can effectively improve access for rural populations to higher quality TVET, provided the referral mechanism works well and affordable boarding in the lead cluster institutions is part of the offer. • Rural apprenticeship schemes, community-based training and mobile training should be considered as integral elements of an inclusive TVET system.

	• TVET governing bodies should acknowledge NGOs, charities, and other private initiatives by providing adequate mechanisms for accreditation, tax relief and financial support. • Private training providers can form alliances to raise public awareness and to effectively contribute to system reform for better inclusion. • TVET institutions need adequate ICT infrastructure and access to broadband services. • Create and maintain a positive attitude of teachers towards digital technology and encourage their readiness and ability to use digital teaching and learning methods. • Effective digital learning solutions and levels of technology should be contextually appropriate. • Strong systems for cooperation of TVET institutions should be established at macro and local levels with employers and their organisations, which include regular dialogue on inclusion issues. • Capacity building of workplace supervisors, trainers and human resources staff can be effective in promoting inclusion and inclusive practices. • Workers' organisations should be included in dialogue that promotes inclusion, as well as lobby groups. • Informal apprenticeships are recognised in TVET systems and disadvantaged groups and women have access to informal apprenticeships.
Skills assessment and certification	• RPL systems must be based on a proper needs assessment, a sound regulatory framework, sustainable financing, inclusive institutional arrangements, quality assurance, and stakeholder engagement and commitment. • Access to certification may not be a sufficient motivation for people to participate and should be coupled with additional incentives, such as access to further training, work permits, occupational licenses, or other (subsidised) services. • Assessment and certification for improved progression and modularised courses should not increase costs for learners or add lengthy bureaucratic procedures. • Assessment centres should be accessible. • National policies should recognise the role of the informal economy in skills training. • Policymakers should recognise small industry organisations that can effectively represent the interests of entrepreneurs in policy formulation and in the development of the assessment and certification mechanisms. • It is beneficial to generate bottom-up and top-down policy formation processes that allow for a balancing of interests between the TVET authorities and the small enterprise sector.

	• Assessments should focus on practical trade skills rather than generic education content, especially for lower competency levels. • Assessors should be recruited from small industry and be sufficiently trained to conduct reliable assessments.
Development of TVET personnel	• Building awareness of inclusion issues at all levels of TVET personnel.
Post-training support	• No specific success factors identified.
Monitoring and evaluation	• Monitoring systems that regularly track key indicators and undertake periodic evaluations. • The participation of members from under-represented groups in the review of monitoring and evaluation data.

Appendix 4: Analysis of Key Success Factors, Building Blocks, and Focuses of identified frameworks

Table 24: Analysis of Key Success Factors, Building Blocks, and Focuses of identified frameworks at System-Level, Programme-Level, and concerned with Inclusion.

	POLICY & COORDINATION	REGULATION	FUNDING	DESIGN & DELIVERY	WORKFORCE PLANNING
SYSTEM LEVEL					
Ten essential building blocks of an effective TVET system. **Taking a whole of government approach to skills development, UNESCO, 2018.**	• Leadership and clarity of purpose across policy domains • Well-functioning partnerships and networks promoting access and equity • Well-functioning institutions, incentives, and accountability mechanisms • Culture of policy learning and continuous improvement	• Leadership and clarity of purpose across policy domains • Well-functioning partnerships and networks promoting access and equity • Standardised QA mechanisms and portability of qualifications • Well-functioning institutions, incentives, and accountability mechanisms • Well-functioning institutions,	• Leadership and clarity of purpose across policy domains • Stable and sustained financing • Well-functioning institutions, incentives, and accountability mechanisms	• Leadership and clarity of purpose across policy domains • Labour market relevance and demand-driven provision • Well-functioning partnerships and networks promoting access and equity • High-performing, quality training institutions • Well-functioning institutions, incentives, and	• Leadership and clarity of purpose across policy domains • Labour market relevance and demand-driven provision • Well-functioning partnerships and networks promoting access and equity • Availability of accurate data and information including Labour Market Information

	POLICY & COORDINATION	REGULATION	FUNDING	DESIGN & DELIVERY	WORKFORCE PLANNING
		incentives, and accountability mechanisms		accountability mechanisms • Public esteem, strong graduation, and employment rates • Culture of policy learning and continuous improvement	
Six Key Features of an Effective TVET system. **Technical and Vocational Education and Training (TVET) Self-Assessment Toolkit, The Commonwealth, 2017.**	• Defined roles and responsibilities within system • Policies and Funding for skills development • Access and equity policies • Support for the TVET sector – Employers • Qualifications Framework • QF Recognition and articulation	• National standards - Institutions • Registration process – Institutions • Validation and moderation processes – Delivery and Assessment	• Policies and Funding for skills development • Support for the TVET sector - Employers	• Curriculum development – employers • Workforce training – (workplace) • Support for the TVET sector – Employers • Competency-based curriculum • Recognition of existing skills and knowledge • Teachers/Trainers • Flexible delivery	• Determining skill priorities • Support for the TVET sector – Employers • Data collection and analysis – Institutions •

	POLICY & COORDINATION	REGULATION	FUNDING	DESIGN & DELIVERY	WORKFORCE PLANNING
	• Teaching and assessment guidelines			• Student support services • Teaching and assessment guidelines	
Building Blocks of Quality Apprenticeship Systems. **ILO Toolkit for Quality Apprenticeships. Volume 1: A Guide for Policy Makers, International Labour Organisation (ILO), 2017.**	• Meaningful social dialogue • Clear roles and responsibilities • Inclusiveness	• Robust regulatory framework	• Equitable funding arrangements • Inclusiveness	• Clear roles and responsibilities • Strong labour market relevance • Inclusiveness	• Meaningful social dialogue • Strong labour market relevance • Inclusiveness
Key Features of Quality Apprenticeships. **OECD note on "Quality Apprenticeships" for the G20 task force**	• Facilitating participation by disadvantaged youth • Covering multiple sectors and occupations and	• Preventing misuse of apprentices as cheap labour • Programmes which are certified and well-integrated	• Not limiting provision and funding to specific age groups • Involving an equitable sharing of costs	• Not limiting provision and funding to specific age groups • Facilitating participation by	• Covering multiple sectors and occupations and encouraging the participation of women

	POLICY & COORDINATION	REGULATION	FUNDING	DESIGN & DELIVERY	WORKFORCE PLANNING
on employment, 2012.	encouraging the participation of women • Preventing misuse of apprentices as cheap labour • Joint management by the social partners (employers, government and labour)	with the formal education system	(employers, government and apprentices)	disadvantaged youth • Including a strong formal training component • Providing training that is not too narrowly focused • Using competency-based rather than time-based progression and completion • Joint management by the social partners (employers, government and labour) • Programmes which are certified and well-integrated with the formal	

	POLICY & COORDINATION	REGULATION	FUNDING	DESIGN & DELIVERY	WORKFORCE PLANNING
				education system	
PROGRAMME LEVEL					
Key Principles of Successful TVET Programmes. **Compass to Workforce Development: A toolkit for policymakers, donors, governments, NGOs, and practitioners. USAID, 1996.**	• Leadership and Accountability • Open Access • Public-Private Partnerships • Economic and Social Impact of the Program or System	• Leadership and Accountability • Continuous Improvement	• Sustainable Financing	• Demand-driven design • Public-Private Partnerships • Replicability	• Demand-driven design • Portable Skills • Economic and Social Impact of the Program or System
Principles and Strategies of a Successful TVET Program. **Principles and Strategies of a Successful TVET Program, USAID, 1996.**	• Access for trainees • Standardisation	• Quality of delivery • Standardisation	• Access for trainees • Funding for the system is secure and uninterrupted	• Relevance to the labour market • Quality of delivery • Standardisation • Inclusion of soft skills	• Relevance to the labour market • Access for trainees

	POLICY & COORDINATION	REGULATION	FUNDING	DESIGN & DELIVERY	WORKFORCE PLANNING
INCLUSION					
Building Blocks of Inclusive TVET Systems. **ILO Guide on making TVET and skills development inclusive for all, 2020.**	• Governance and strategy development • Access • Skills assessment and certification	• Access • Skills assessment and certification • Monitoring and evaluation	• Access	• Access • Standards, qualifications, and curriculum • Delivering skills, including work-based learning • Skills assessment and certification • Development of TVET personnel • Post-training support	• Access • Skill needs identification • Development of TVET personnel

Appendix 5: Evaluations of Focus Country alignment with identified indicators of industry training system success

Table 25: Evaluation of Cook Islands alignment with identified indicators of successful industry training systems.

COOK ISLANDS		
SUCCESS FACTOR	**INDICATOR**	**EVALUATION**
POLICY & COORDINATION - Policy is evidence based and responsive to national, labour market and learner needs	Policy is continually refreshed through targeted evidence-based research.	No dedicated skills formation policy exists aside from an outdated and underused Apprenticeship Act (Apprenticeship Act 1978-79). A strategy for skill development was referenced but not identified (Cook Islands Ministry of Education, 2013). Ministry of Education Planning, Policy, and Review Division is tasked with evaluating Ministry of Education Policy (Cook Islands Ministry of Education, 2016). Cook Islands Strategy for the Development of Statistics 2015-2025 describes a robust strategy and framework for improving the collection of national statistics (Cook Islands Statistics Office, 2015). However, Ministry of Education statistical releases continue to have only small amounts of monitoring of tertiary and vocational training (Cook Islands Ministry of Education, 2020). Unclear how research and effective evaluation impacts policy development processes for skills development.
	Government has a culture of continual improvement.	Cook Islands Ministry of Education Governance, Management, and Planning policy states a strategic objective to have a philosophy of continual monitoring, evaluation, development, innovation, and improvement (Cook Islands Ministry of Education, 2016).

	Impact of policies is evaluated, and lessons integrated into policy.	Cook Islands Ministry of Education 2020-2023 statement of intent states an aim to incorporate recommendations from programme evaluations into future planning (Cook Islands Ministry of Education, 2020).
	Budgets are allocated in line with stakeholder need and programme requirements.	National Sustainable Development Strategy 2016-2020 (Government of the Cook Islands, 2016) outlines goals and indicators for national development that inform national budgets (Government of the Cook Islands, 2021) however national plans have little to no articulation of industry training.
	Policies align with regional cooperation initiatives and agreements	National Sustainable Development Strategy 2016-2020 (Government of the Cook Islands, 2016) is closely aligned with regional and international commitments. This strategy informs budget priorities.
POLICY & COORDINATION - Skills policy is well articulated across the policy and governance spectrum, and representative of stakeholders needs and capabilities	Policy identifies all key stakeholders, and addresses their needs, contexts, and capabilities.	Cook Islands Ministry of Education Governance, Management, and Planning policy states the intention to increase ownership of education processes by different stakeholders at different levels (Cook Islands Ministry of Education, 2016).
	Policy establishes clear aims, principles, and accountabilities for skills development arrangements.	Skills development is underrepresented in Cook Islands Policy. Indicators for success in the area are limited to increasing graduate numbers of vocational education.
	Policy addresses the development needs and limitations of the national labour market.	Development strategies state the need to grow strength sectors and sustainably diversify into new sectors to promote a resilient economy (Government of the Cook Islands, 2016).
REGULATION - Regulatory arrangements are robust and enable effective labour market and	There are robust evidence-based criteria designed to drive and improve educational performance.	Ministry of Education is tasked with regulating provider participation (Education Act 2012) but no clear participation criteria were identified.
	Educational performance criteria are clear, evidence based and support learner achievement and inclusion .	No detailed work-based learning educational performance criteria were identified in this research.

programme outcomes		Ministry of Education Policies detail priority actions to address inclusion (Cook Islands Ministry of Education, 2016) but performance outcomes for inclusion were not identified in this research.
	The participation of providers in IT is managed to remove or reduce harms to learners' health, safety, and educational welfare.	Few tertiary providers exist in the Cook Islands. Cook Islands Tertiary Training Institute (CITTI) is operated by the government and is therefore its performance is easily managed. USP also operates a campus on Rarotonga however does not offer construction relevant courses aside from engineering programmes. USP is a regional institution and partly owned by the Cook Islands government.
	Educational performance is effectively monitored and managed in accordance with educational performance requirements.	Insufficient information to evaluate the educational performance management in the Cook Islands. Indicators for evaluation are heavily weighted toward academic and compulsory education; indicators for tertiary and vocational education are limited to participation (Cook Islands Ministry of Education, 2020). Industry training is not included here either; despite construction industry training not being present in the Cook Islands, current hospitality apprenticeship data was expected but not identified. Evaluation of teachers in academic education is annual, robust, and supported by a performance management system and CPD (Cook Islands Ministry of Education, 2016).
	There are clear, fair, and transparent processes and systems to support learner and provider participation and management.	Learner participation in tertiary education is supported through government scholarship schemes administered by the Tertiary Education Committee (Government of the Cook Islands); scholarships are identified as a key means to drive tertiary and vocational education access and participation (Cook Islands Ministry of Education, 2016). Private providers must demonstrate that they meet a need within the Cook Islands and are subject to equal funding from the government provided they meet government

		quality assurance regulations (Cook Islands Ministry of Education, 2016). Guidelines and other assistance to the application process were not identified in this research.
REGULATION - Programmes and qualifications are well articulated and responsive to learners' needs and capabilities	Qualification and programme design requirements are clearly articulated and support effective programme outcomes.	Some Cook Islands Tertiary Training Institute (CITTI) programmes are based on international programmes from NZ and London City and Guilds. These programmes benefit from robust design processes. Design requirements for other CITTI programmes and other provider programmes were not identified.
	Qualifications are aligned with labour market needs.	Some Cook Islands Tertiary Training Institute (CITTI) programmes are based on international programmes from NZ and London City and Guilds. It is unclear how relevant these qualifications are to the Cook Islands labour market. Participants in the research identified that programmes taught through CITTI were sometimes not to the standards, or to the same systems, that the Cook Islands Labour Market needs.
	Programmes are well resourced and support the attainment of the programme learning objectives and standards.	Participants in this research identified a lack of funding as a barrier to the establishment of industry training systems in the Cook Islands. Moreover, they identified a lack of skilled trainers to deliver the programmes.
	Programme progression pathways facilitate effective learning and career advancement.	Cook Islands Tertiary Training Institute (CITTI) has achieved accreditation for several vocational courses in NZ and with London City Guilds (Cook Islands Tertiary Training Institute, 2020); importantly, for building, electrical, and plumbing trades.
FUNDING - Funding systems provide the incentives and	Funding systems provide equitable access to learning.	Tertiary Education Committee administers government tertiary education scholarships, with low entry criteria, to enable tertiary education access in the Cook Islands or Overseas. If used overseas, learners must return and work within the Cook Islands for a period of 2 years following study (Government of the Cook Islands).

support needed to sustain participation by learners and stakeholders	Funding incentives are designed to maximise sustainable participation by learners and employers.	Insufficient information was identified to evaluate funding incentives. Providers of education are funded centrally and employers are not engaged in providing formal work-based learning currently (the exception being hospitality apprenticeships but no information could be identified about financial incentives for employers of these apprentices).
FUNDING - Funding systems drive and sustain consistent and effective provider performance	Providers can access the funding required to sustain performance.	Participants in this research identified a lack of funding as a barrier to the establishment of industry training systems in the Cook Islands.
	National investment in WBL takes national and labour market needs and priorities into account.	National investment in work-based learning is focused on increasing the graduate numbers through CITTI as well as from other providers overseas. This is following investment priorities refocusing after the COVID-19 pandemic response (Government of the Cook Islands, 2021). It is unclear whether this broad justification to work-based learning investment is effective. Participants in this research identified that construction courses at CITTI and, to some degree, those received overseas were not relevant to the Cook Islands Labour Market. So, simply increasing the number of graduates may be ineffective to create the skilled workforce required by the Cook Islands.
DESIGN & DELIVERY - Programmes and qualifications are relevant to labour market and learner aspirations	Employers and social partners are engaged in designing, approving, and reviewing qualifications.	Participant in this research stated that communication lines are open between providers and industry in the Cook Islands: To Tatou Vai for water services, CITTI via Pacific TVET (PacTVET), and USP through Pacific Centre for Environment and Sustainable Development (PACE-SD). It is unclear however whether construction employers are engaged in the design and review of qualifications at CITTI. Industry Advisory Boards are mentioned in the Ministry of Education 2013/14 Annual report (Cook Islands Ministry of Education, 2014).

	Qualifications are aligned to national and international qualification frameworks.	Some modules from Cook Islands Tertiary Training Institute qualifications can be flexibly delivered to learners in industry based on need. Education Act 2013 gives the option of creating a national qualifications framework, however it is unclear if and when this will be established (Government of the Cook Islands).
DESIGN AND DELIVERY - Delivery of learning and assessment is effective, efficient and addresses the educational welfare of students.	Programme teaching and learning design and management support the achievement of programme learning outcomes.	Insufficient information to evaluate programme teaching and learning methods.
	Programme learning design support ongoing learner progression.	Insufficient information to evaluate scaffolding of programmes. Ministry of Education have developed Dual Pathways programmes for secondary school learners to achieve vocational competences whilst still at school (Cook Islands Ministry of Education, 2014). Construction programmes that are accredited in NZ or by London City and Guilds are scaffolded to national qualifications frameworks.
	Programme design and delivery is inclusive and address the learning requirements of all its learners.	Cook Islands Ministry of Education Equity, Access, and Participation policy describes the objective to make all education programmes accessible; to support specialised programmes for underrepresented groups; to ensure that learning environments are inclusive; and to consider wider community needs in the development of programmes (Cook Islands Ministry of Education, 2016). A priority action within this policy is that “there is active collaboration with community and industry groups to provide and improve access and inclusion in relation to content and delivery of relevant learning programmes including recognised work-based training programmes.”

	Teachers and trainers have the knowledge and skills required to teach the programme.	A lack of skilled trainers was identified by participants in this research.
	Programmes are resourced in accordance with their design and teaching requirements.	No industry training programmes in construction, however employers in this research identified limited funding to provide workplace training. Participants in this research identified that programmes at CITTI were not effectively resourced. Private and public schools have funding parity.
	Learner recruitment ensures that learners have the capabilities and aspirations required for successful completion.	Insufficient information to evaluate the effectiveness of learner recruitment. Insufficient information to evaluate programme entry for institutions.
	Learners' prior experience and knowledge is recognised for accreditation and progression	Ministry of Education Governance, Management, and Planning policy states that a priority policy action is to have non-formal education recognised as a relevant component of education provision (Cook Islands Ministry of Education, 2016).
	Assessments are valid, sufficient, and fair, and avoid overburdening learners.	Insufficient information to evaluate assessment of programmes. Programmes that are accredited in NZ are subject to NZ assessment standards.
	Design of programmes integrates traditional knowledge and skills where these support programme outcomes.	Community based training run by the Cook Islands Tertiary Training Institute (CITTI) in the Pa Enua (Outer Islands) aim to integrate indigenous cultural values with 21st Century skills (Cook Islands Ministry of Education, 2014). This training includes a multi-skills certificate in trades. Ministry of Education has developed a series of competence standards for senior secondary education that have been incorporated on the NZQF (Cook Islands Ministry of Education, 2014).

		Ministry of Education has a focus on Cook Islands culture and language in general education; it is unclear whether this is incorporated into vocational education.
WORKFORCE DEVELOPMENT - National labour market and workforce development needs are recognised and addressed	There are rigorous and effective processes for identifying labour market needs and trends.	Cook Islands Strategy for the Development of Statistics 2015-2025 notes the need for more regular and accurate labour market data (Cook Islands Statistics Office, 2015). It is unclear how this has been acted on and how frequently this information is now collected. Latest labour force survey in 2019 (Cook Islands Statistics Office, Cook Islands Government, 2020).
	National workforce development priorities and plans are developed in consultation with key labour market stakeholders.	Sector specific workforce development plans were not identified in this research. National development plans identify priority economic development areas but no specific plans (Government of the Cook Islands, 2016).
	National workforce development priorities inform the development of workforce investment.	National Sustainable Development Plan informs the annual budgetary allocations for workforce investment however this plan only states the intention to grow the tourism, finance, and fisheries sectors and strengthen other industries (Government of the Cook Islands, 2016).
WORKFORCE DEVELOPMENT - All stakeholders are engaged and contribute effectively to workforce development	Industry training is promoted and supported as a viable and valuable occupational choice.	The government supports vocational training through government scholarships, however it is unclear how much this incentivises enrolment in local training compared with overseas training. Apprenticeships are the only form of true industry training in the Cook Islands however these are only for the Hospitality sector and it is unclear how these are promoted within the community. Public perceptions of these apprenticeships were not identified however in this research CITTI described employers as happy to send their employees to train in their institutional courses.

	Stakeholders are provided the support and incentives they need to participate fully in the IT system.	Learners receive strong participation support through government scholarships. Institutions receive government funding but it was stated by participants in this research that this may not be sufficient. Employers in the construction sector are not currently engaged in the formal training system. Employers in the hospitality sector have some access to apprenticeships; it was not identified in this research what support or incentives are offered to these employer-providers.

Table 26:Evaluation of Kiribati alignment with identified indicators of successful industry training systems.

KIRIBATI		
SUCCESS FACTOR	**INDICATOR**	**EVALUATION**
POLICY & COORDINATION - Policy is evidence based and responsive to national, labour market and learner needs	Policy is continually refreshed through targeted evidence-based research.	Kiribati Ministry of Education has a Policy, Planning, Research, and Development Division intended to provide guidance and research on policy matters within education (Kiribati Ministry of Education, 2021). Ministry of Education also formulated a body named Education Partners in Kiribati (EPiK) to coordinate the support for Kiribati's national education goals (Kiribati Ministry of Education, 2021); this body has all relevant ministries, development agencies, and national education bodies. Kiribati National Statistics Office within the Ministry of Finance and Economic Development releases periodic national statistics (Kiribati National Statistics Office, 2021) but these are limited. Kiribati 20 Year Vision 2016-2036 (Government of Kiribati, 2016) informs the development of national development plans of which Education was a key priority area in the 2016-2019 plan (Government of Kiribati, 2016). These national development plans inform Ministry strategic plans, operational plans, and, subsequently, the national budget.
	Government has a culture of continual improvement.	Ministry of Employment and Human Resource mission statement includes a statement about continuous improvement to meet global best practices standards (Kiribati Ministry of Employment and Human Resource, 2021). Office of Te Beretitenti (Office of the President) 2020 policy statement describe the

		intention to continue to improve tertiary and vocational education in Kiribati (Government of Kiribati, 2020).
	Impact of policies is evaluated, and lessons integrated into policy.	There is evidence of policy and national strategy evaluation from the National Economic Planning Office (Government of Kiribati, 2014).
	Budgets are allocated in line with stakeholder need and programme requirements.	Ministry of Finance and Economic Development National Economic Planning Office works with ministries to develop national strategy and plans (Kiribati Ministry of Finance and Economic Development, 2021). These plans inform annual budget allocations and priorities. Insufficient information to evaluate whether the government plans accurately reflect stakeholder needs.
	Policies align with regional cooperation initiatives and agreements	Office of Te Beretitenti (Office of the President) 2020 policy statement describe the intention to continue to explore and increase employment opportunities abroad including supporting labour mobility schemes and international study incentives (Government of Kiribati, 2020). Ministry of Employment and Human Resource acknowledges labour market limitations and is seeking out quality employment for Kiribati workers both within Kiribati and overseas (Kiribati Ministry of Employment and Human Resource, 2021).
POLICY & COORDINATION - Skills policy is well articulated across the policy and governance spectrum, and representative of	Policy identifies all key stakeholders, and addresses their needs, contexts, and capabilities.	Ministry of Education has formulated a body named Education Partners in Kiribati (EPiK) to coordinate the support for Kiribati's national education goals (Kiribati Ministry of Education, 2021); this body has all relevant ministries, development agencies, and national education bodies.
	Policy establishes clear aims, principles, and accountabilities for skills development arrangements.	Skills development and tertiary arrangements are managed through the Ministry of Employment and Human Resource Development whereas education up to and including secondary school is managed by the Ministry of Education. These allocations are reasonably clear however contradictions may occur as more tertiary education options are added.

stakeholders needs and capabilities		Ministry of Education also formulated a body named Education Partners in Kiribati (EPiK) to coordinate the support for Kiribati's national education goals (Kiribati Ministry of Education, 2021); this body has all relevant ministries, development agencies, and national education bodies.
	Policy addresses the development needs and limitations of the national labour market.	Te Beretitenti Policy Statement 2020 acknowledges the limited size of the Kiribati economy (Government of Kiribati, 2020) and the Kiribati 20-year vision 2016-2036 states that Kiribati should leverage its strengths whilst diversifying its economy (Government of Kiribati, 2016).
REGULATION - Regulatory arrangements are robust and enable effective labour market and programme outcomes	There are robust evidence-based criteria designed to drive and improve educational performance.	Participation criteria for accredited providers are set out in the Pacific Quality Assurance Framework (PQAF) (Pacific Community, 2018) and are externally accredited through the Pacific Community (SPC) (Pacific Community, 2018); Kiribati does not have tertiary quality assurance agencies so has opted for SPC to perform these functions.
	Educational performance criteria are clear, evidence based and support learner achievement and inclusion .	Pacific Quality Assurance Framework (PQAF) (Pacific Community, 2018) sets out criteria for accreditation of qualifications and programmes on the SPC regional framework which Kiribati tertiary providers seek to uphold. Limited educational performance criteria were identified in this research. Quality of institutional provision is externally assured by SPC against their regional framework; workplace attachments that form part of some KIT programmes are only loosely monitored. Participants in this research identified employers of attached students had logbooks to complete for their attached learners however these were not outcome based. Some employers taking attached students have developed induction programmes for these learners which specify the outcomes they will learn however these are not integrated into the programmes at KIT.
	The participation of providers in IT is managed to remove or reduce harms to learners' health, safety, and educational welfare.	Few providers of TVET exist in Kiribati, the main provider is the Kiribati Institute of Technology (KIT). Kiribati 20-year vision 2016-2036 states the intention to increase the number of islands with access to vocational training centres (Government of Kiribati, 2016). Poor provider participation is less of an issue than providing access to these modes of training.

	Educational performance is effectively monitored and managed in accordance with educational performance requirements.	Programmes at KIT are internally monitored for quality through a Quality Teaching and Learning Committee (QTLC) and externally monitored through the SPC regional quality assurance framework.
	There are clear, fair, and transparent processes and systems to support learner and provider participation and management.	Scholarships for tertiary study and financial supports for learners such as meals and transport are mentioned in the Te Beretitenti 2020 policy address (Government of Kiribati, 2020). It is unclear how established these are.
REGULATION - Programmes and qualifications are well articulated and responsive to learners' needs and capabilities	Qualification and programme design requirements are clearly articulated and support effective programme outcomes.	Programme design requirements vary within Kiribati. Different international accreditations mean a varied number of design requirements. KIT has agreements with RTOs in Australia and with the SPC regional quality assurance framework for example. There is no national qualifications framework in Kiribati; instead, qualifications are aligned with the Pacific Qualifications Framework (PQF).
	Qualifications are aligned with labour market needs.	Several construction programmes provided though KIT have workplace attachments, though participants in this research noted that these are not outcome based and there is little communication between KIT and the employers about the development needs of the learners. Barriers were identified in this research to accrediting higher level KIT construction programmes in Australia. These higher-level programmes are required by industry.
	Programmes are well resourced and support the attainment of the programme learning objectives and standards.	Ministry of Education National Sector Strategic Plan 2016-2019 (Kiribati Ministry of Education, 2017) has a goal to ensure ministry support services match the needs of schools; no mention of tertiary institutions in this policy though.

	Programme progression pathways facilitate effective learning and career advancement.	Accredited programmes in Kiribati are aligned with the Pacific Qualifications Framework (PQF) promoting labour mobility through the pacific. Some programmes also lead to Australian qualifications through a RPL process that links to the AQF. Insufficient information to evaluate whether Kiribati programmes articulate their potential progression pathways.
FUNDING - Funding systems provide the incentives and support needed to sustain participation by learners and stakeholders	Funding systems provide equitable access to learning.	Scholarships are often the defining factor to providing access to education in Kiribati (Australian Council for Educational Research and Scope Global , 2014). Scholarships are available to all tertiary education providers in Kiribati and are extended in some cases to overseas institutions too. Some international donors offer scholarship programmes too.
	Funding incentives are designed to maximise sustainable participation by learners and employers.	Donor funding is a substantial proportion of tertiary and vocational education provider funding in Kiribati (Australian Council for Educational Research and Scope Global , 2014), this poses a risk to the sustainability of the system. Workplace attachments for KIT construction programmes are frequently within government institutions so there is more control over managing this capacity.
FUNDING - Funding systems drive and sustain consistent and effective provider performance	Providers can access the funding required to sustain performance.	The most significant construction programme provider, KIT, receives significant donor support and it a division of the Ministry of Employment and Human Resource so receives transparent and stable government funding. Still, there is insufficient funding to meet TVET demand, with a significant proportion of applicants missing out on a place in TVET training at KIT (Australia Pacific Trainnig Coalition, 2019). Participants in the research stated that funding mechanisms from the Kiribati government to KIT were inefficient. Donor funding processes were effective. It is not clear whether these inefficiencies are limited to the construction programmes at KIT or are more widely impactful. Branch of Pacific TAFE through USP that provides programmes unrelated to construction only receives student fees for funding.

	National investment in WBL takes national and labour market needs and priorities into account.	Kiribati has a strong national planning system that informs budget priorities and allocations. The Kiribati Government is aiming to increase the offering of TVET programmes available. The Kiribati 20-year Vision outlines the plan to further align TVET provision to the broader national development agenda and to diversify TVET offerings to meet wider industry needs (Australia Pacific Trainnig Coalition, 2019).
DESIGN & DELIVERY - Programmes and qualifications are relevant to labour market and learner aspirations	Employers and social partners are engaged in designing, approving, and reviewing qualifications.	Course Advisory Committees (CACs) provide guidance on course requirements to KIT from industry members; donor representatives also contribute to these activities. The 'Apprenticeship Board', managed by the Ministry of Employment and Human Resource, works to develop the student attachments from KIT programmes however these are not outcome-based (Australian DFAT, 2015).
	Qualifications are aligned to national and international qualification frameworks.	No Kiribati Qualifications Framework however Kiribati aligns itself to the Pacific Qualifications Framework (PQF), some KIT programmes are recognised throughout the Pacific. Other KIT qualifications are accredited against the Australian Qualifications Framework (AQF) and are recognised in Australia and NZ.
DESIGN AND DELIVERY - Delivery of learning and assessment is effective, efficient and addresses the educational welfare of students.	Programme teaching and learning design and management support the achievement of programme learning outcomes.	KIT institutional delivery is working well however participants in this research identified that workplace attachments through KIT programmes are not outcome driven and there is little communication between KIT and employers regarding learner needs.
	Programme learning design support ongoing learner progression. .	Programmes of study are aligned with the Pacific Qualifications Framework (PQF), hence they are scaffolded and enable progression. Insufficient information to evaluate learning method scaffolding.
	Programme design and delivery is inclusive and address the learning requirements of all its learners.	KIT has a large focus on inclusive delivery, particularly on achieving access for the outer islands.

		The Kiribati Facility, an Australian Aid programme working to improve and empower KIT, has a focus on inclusion including programmes specific for disadvantaged and marginalised individuals. Some have construction focuses.
	Teachers and trainers have the knowledge and skills required to teach the programme.	As KIT has achieved regional accreditation with SPC, it has to maintain its teaching staff per SPC quality assurance standards. Teachers and trainers in KIT must be qualified with Training and Assessment methods among other requirements.
	Programmes are resourced in accordance with their design and teaching requirements.	KIT programmes, including non-accredited programmes, are not offered unless sufficient resources exist to deliver them. This is judged by the Quality Teaching and Learning Committee.
	Learner recruitment ensures that learners have the capabilities and aspirations required for successful completion.	Government cannot meet demand for places at KIT (Australia Pacific Trainnig Coalition, 2019). Insufficient information to evaluate learner recruitment processes for TVET institutions in Kiribati.
	Learners' prior experience and knowledge is recognised for accreditation and progression	KIT offers RPL processes with several Australian qualifications that they teach to. Under normal circumstances, learners will enroll in these programmes, develop skills, and then an Australian assessor with be brought in periodically to assess students' skills and award the qualifications.
	Assessments are valid, sufficient, and fair, and avoid overburdening learners.	Insufficient information to evaluate assessment methods at KIT.
	Design of programmes integrates traditional knowledge and skills where these support programme outcomes.	The National Quality Policy of Kiribati 2017-2023 (Kiribati Ministry of Commerce, Industry, and Cooperatives, 2017) states that the Ministry of Education will strive to incorporate traditional cultural skills in the national curriculum (general education not TVET). No information about the national inclusion of traditional knowledge and skills in TVET. Participants in this research identified several challenges with their incorporation however including a cultural barrier to sharing familial traditional knowledge. Though it was also identified that the use of traditional knowledge and

		skills might make the local construction sector more sustainable and less reliant on external materials.
WORKFORCE DEVELOPMENT - National labour market and workforce development needs are recognised and addressed	There are rigorous and effective processes for identifying labour market needs and trends.	Labour Division of the Ministry of Employment and Human Resource has a Labour Market Information And Marketing (LMIM) Unit to collect labour market information (Kiribati Ministry of Employment and Human Resource, 2021). Participants in the research identified the need to balance traditional knowledge and skills with modern techniques as for example, in some instances, traditional methods do not meet modern safety standards.
	National workforce development priorities and plans are developed in consultation with key labour market stakeholders.	Ministry of Employment and Human resource advises on policy priorities. National Economic Planning Office under the Ministry of Finance and Economic Development guides the development of national plans in consultation with government and private sector representatives (Government of Kiribati, 2016). It is unclear how significant private sector contributions are to the creation of development priorities.
	National workforce development priorities inform the development of workforce investment.	National workforce development priorities are highlighted in national strategies that inform budgetary allocations.
WORKFORCE DEVELOPMENT - All stakeholders are engaged and contribute effectively to workforce development	Industry training is promoted and supported as a viable and valuable occupational choice.	Ministry of Employment and Human Resource Labour Market Information and Marketing Unit (LMIM) proves advocacy and promotion of TVET in Kiribati along with skills supply information and vocational guidance services (Kiribati Ministry of Employment and Human Resource, 2021).
	Stakeholders are provided the support and incentives they need to participate fully in the IT system.	Employers are not offered financial incentives to participate in work-based learning, learners have scholarships open to them but it is unclear how accessible these are, providers are limited, but receive significant support. Technical support is working well, KIT appears under-resourced to meet demand for training (Australia Pacific Trainnig Coalition, 2019).

Table 27:Evaluation of Niue alignment with identified indicators of successful industry training systems.

NIUE		
SUCCESS FACTOR	**INDICATOR**	**EVALUATION**
POLICY & COORDINATION - Policy is evidence based and responsive to national, labour market and learner needs	Policy is continually refreshed through targeted evidence-based research.	Education in Niue is governed by the Education Act of 1989 (Education Act 1989). No separate skills formation or TVET policy exists, and the education policy only guides the provision of technical subjects within government schools, including trades.
	Government has a culture of continual improvement.	Recently, the public sector in Niue went through a transformation and consolidation to improve effectiveness (Talagi, 2017). Attitudes of government representatives in this research indicated openness to new ideas and change. With limited resources to allocate to education beyond salaries from education officials, NZ Aid funding is crucial to educational improvement initiatives (New Zealand Ministry of Foreign Affairs and Trade, 2015).
	Impact of policies is evaluated, and lessons integrated into policy.	Not enough information to evaluate the evaluation of policies.
	Budgets are allocated in line with stakeholder need and programme requirements.	Government coordinates funding for education programmes with NZ Aid funding. With the absence of formal industry training systems, budgets are allocated centrally to school systems, primarily salaries. NZ Aid funding is crucial to educational improvement initiatives (New Zealand Ministry of Foreign Affairs and Trade, 2015); there is no allocation toward industry training currently and likely due to a lack of capacity.
	Policies align with regional cooperation initiatives and agreements	No detracting policies could be found, however an MFAT review of aid funding found that there has been a lack of high level or systematic engagement between the Niuean Department of Education and New Zealand parties at 2015 (New Zealand Ministry of Foreign Affairs and Trade, 2015). Niue has a close relationship with NZ and labour mobility, including further training in NZ is a key part of their skills

		development system. Niue high school programmes, aligned with BCITO and Unitec programmes, act as pathways to NZ construction tertiary education programmes.
POLICY & COORDINATION - Skills policy is well articulated across the policy and governance spectrum, and representative of stakeholders needs and capabilities	Policy identifies all key stakeholders, and addresses their needs, contexts, and capabilities.	Education policy does not address industry stakeholder needs. The policy only includes regulation for the allowance of young people to leave compulsory education early if they have found employment under certain conditions.
	Policy establishes clear aims, principles, and accountabilities for skills development arrangements.	No Skills development or TVET strategy exists.
	Policy addresses the development needs and limitations of the national labour market.	No Skills development or TVET strategy exists.
REGULATION - Regulatory arrangements are robust and enable effective labour market and programme outcomes	There are robust evidence-based criteria designed to drive and improve educational performance.	There are no formal TVET providers in Niue. Education in technical skills is conducted within the single secondary school, Niue High School.
	Educational performance criteria are clear, evidence based and support learner achievement and inclusion .	EPIs could not be identified; UNICEF recognises the lack of up-to-date educational indicators (UNICEF, 2017). Mission statement of the Department of Education explicitly mentions inclusive principles.
	The participation of providers in IT is managed to remove or reduce harms to learners' health, safety, and educational welfare.	USP, Niue Branch is the only private tertiary provider in Niue. Due to small scale, education institution participation is managed centrally with the Niue Cabinet.
	Educational performance is effectively monitored and managed in accordance with	No industry training system in place. General education have annual performance reviews for teachers. Student achievement and enrolment numbers are used to monitor institutional performance in general education.

	educational performance requirements.	
	There are clear, fair, and transparent processes and systems to support learner and provider participation and management.	Not enough information. Niue Cabinet manages the participation of institutions but criteria for this are not clear. Niue government directly supports learners in general education.
REGULATION - Programmes and qualifications are well articulated and responsive to learners' needs and capabilities	Qualification and programme design requirements are clearly articulated and support effective programme outcomes.	No industry training qualifications in Niue. Multi skills certificate from Niue High School is based on a foundation trades programme from Unitec, NZ with clear outcomes.
	Qualifications are aligned with labour market needs.	No industry training qualifications. Multi skills certificate has pathway to further study in NZ. Construction labour market in Niue accepts multi skills graduates but we cannot conclude whether they have the right competences. Some students leave school and directly transition into construction employment. Employers offer supplementary training for their employees in the workplace in the absence of industry training programmes to meet their needs.
	Programmes are well resourced and support the attainment of the programme learning objectives and standards.	Niue High School multi skills certificate and BCATS programme receive government funding however NZ aid funding is crucial to the sustainability of these programmes.
	Programme progression pathways facilitate effective learning and career advancement.	Niue Multi Skills certificate and BCATS programme are integrated with NZ learning pathways.

FUNDING - Funding systems provide the incentives and support needed to sustain participation by learners and stakeholders	Funding systems provide equitable access to learning.	Niue's education system is guided by inclusive principles. Remote learners are less of an issue for Niue due to its size and government provides financial assistance to ensure learners have access to general education including transport and small funds for learning materials. This creates an inclusive environment for general education however we do not have any evidence for industry training funding arrangements as no industry training is occurring.
	Funding incentives are designed to maximise sustainable participation by learners and employers.	Challenges to funding participation arise from Niue's dependence on aid funding, particularly from NZ. Niue are looking to transition to a financially independent country in the future. Funding for education only comes from government at the moment and there is an opportunity to include employers and other stakeholders in these arrangements as they are made to share costs equitably.
FUNDING - Funding systems drive and sustain consistent and effective provider performance	Providers can access the funding required to sustain performance.	General education providers have sufficient funding through government and donor sources.
	National investment in WBL takes national and labour market needs and priorities into account.	No current investment in industry training systems. WBL funding is directed to pre-trades programmes through secondary schools. This investment is not explicitly directed to labour market needs.
DESIGN & DELIVERY - Programmes and qualifications are relevant to labour market and learner aspirations	Employers and social partners are engaged in designing, approving, and reviewing qualifications.	No industry training programmes to design or review. Multi skills certificate and BCATS programme from Niue High School is based off a NZ qualification and has been contextualised for the Niue context. Specific contextualisation activities were not explicit in this research.
	Qualifications are aligned to national and international qualification frameworks.	Multi skills certificate and BCATS programme integrate with NZ learning pathways and frameworks. There are no further learning opportunities in construction in Niue.
DESIGN AND DELIVERY - Delivery of learning and assessment is	Programme teaching and learning design and management support the achievement of programme learning outcomes.	No industry training programmes in Niue. Not enough information about TVET programmes within Niue High School.

effective, efficient and addresses the educational welfare of students.	Programme learning design support ongoing learner progression. .	No industry training programmes in Niue. Not enough information about learning programme design for TVET programmes in Niue high school.
	Programme design and delivery is inclusive and address the learning requirements of all its learners.	TVET programmes in Niue High School are underpinned by inclusive principles and support is given to encourage comprehensive inclusion. Learning materials for these programmes are contextualised to Niuean context. Further information regarding inclusivity of programme design has not been identified.
	Teachers and trainers have the knowledge and skills required to teach the programme.	Current teachers and trainers for the Niue High School-based programmes were reported to be effective. Particularly, their bilingual skills were valued in the Niuean context.
	Programmes are resourced in accordance with their design and teaching requirements.	General education programmes are funded effectively, however, these are, in part, dependent on donor funding. No industry training programmes for resource evaluation.
	Learner recruitment ensures that learners have the capabilities and aspirations required for successful completion.	No industry training programmes in Niue. Some young people are recruited directly from school programmes, others leave to train overseas. Not enough information to evaluate learner recruitment processes.
	Learners' prior experience and knowledge is recognised for accreditation and progression	No recognition of prior learning or current competence in Niue. No construction programmes to recognise against.
	Assessments are valid, sufficient, and fair, and avoid overburdening learners.	No industry training systems therefore no assessment methods to evaluate. Not enough information about school-based programme assessment.
	Design of programmes integrates traditional knowledge and skills where these support programme outcomes.	No industry training programmes to evaluate. Programmes delivered in Niue High School are contextualised from New Zealand programmes. Not enough information to determine whether traditional knowledge and skills are included or should be included.

WORKFORCE DEVELOPMENT - National labour market and workforce development needs are recognised and addressed	There are rigorous and effective processes for identifying labour market needs and trends.	Government departments have internal development plans. No identified method of labour market monitoring.
	National workforce development priorities and plans are developed in consultation with key labour market stakeholders.	No information identified regarding national workforce planning.
	National workforce development priorities inform the development of workforce investment.	No information identified regarding national workforce planning.
WORKFORCE DEVELOPMENT - All stakeholders are engaged and contribute effectively to workforce development	Industry training is promoted and supported as a viable and valuable occupational choice.	No industry training system in Niue.
	Stakeholders are provided the support and incentives they need to participate fully in the IT system.	No industry training system therefore no support and incentives to participate. Stakeholders have shown interest in engaging with industry training models.

Table 28: Evaluation of Solomon Islands alignment with identified indicators of successful industry training systems.

SOLOMON ISLANDS		
SUCCESS FACTOR	**INDICATOR**	**EVALUATION**
POLICY & COORDINATION - Policy is evidence based and responsive to national, labour market and learner needs	Policy is continually refreshed through targeted evidence-based research.	Not enough information to determine whether policy reviews are based on research and evidence. One recent study has found political priorities from donors constrain the achievement of policy objectives in the Solomon Islands (Sahin & Shahin, 2019). The National Education Development Plan 2016-2020 identifies the need to undertake more rigorous labour market studies so that provision can better match labour market demand (Solomon Islands Ministry of Education and Human Resource Development, 2016).
	Government has a culture of continual improvement.	Tertiary education policy has been reviewed in recent years. Previously there was a long period without educational system change. Not enough information has been identified to evaluate the government review process.
	Impact of policies is evaluated, and lessons integrated into policy.	Robust policy evaluation processes appear to be in place for policies and ministries. Annual and quarterly reviews against the National Education Action Plan are performed by the Ministry of Education and Human Resource Development (Solomon Islands Ministry of Education and Human Resource Development, 2019). Policy Implementation Monitoring and Evaluation Unit (PIMEU) at the Office of the Prime Minister and Cabinet (OPMC) exists to evaluate policy in the Solomon Islands (Solomon Islands Government, 2021).

	Budgets are allocated in line with stakeholder need and programme requirements.	Some historical evidence of scholarship overallocation (Solomon Islands Ministry of Education and Human Resource Development, 2016). Reform of the Solomon Islands Tertiary education sector puts SITESA as the coordinator of funding requirements for the sector; this will include budget and performance compliance reporting to the Ministry of Finance and Treasury. Not enough evidence was identified to evaluate whether education budgets are allocated in line with stakeholder needs and impacts. Evaluations of budget effectiveness from the move to a more integrated tertiary education sector in the coming years will be illustrative.
	Policies align with regional cooperation initiatives and agreements	Not enough evidence to evaluate policy impacts on regional cooperation efforts. Solomon Islands 2030 strategy details aspiration for mutual recognition of qualifications by selected country partners including Australia, NZ, Fiji, and PNG. SITESA Act 2017 states that the Solomon Islands National Qualifications Framework should align qualifications with comparable regional and international qualifications as far as is reasonably practical (Solomon Islands Tertiary Education and Skills Authority Act 2017).
POLICY & COORDINATION - Skills policy is well articulated across the policy and governance spectrum, and representative of stakeholders needs and capabilities	Policy identifies all key stakeholders, and addresses their needs, contexts, and capabilities.	Current Education Strategic Framework 2016-2030 identifies the need to include a wide range of stakeholders (Solomon Islands Ministry of Education and Human Resource Development, 2016). Recent SITESA Act is shifting roles and responsibilities in the sector. Respondents suggested that the overlap of roles between SITESA and Department of Labour were a challenge, however these might be attributed to growing pains. Revision of the SITESA Act since its establishment shows flexibility.
	Policy establishes clear aims, principles, and accountabilities	Education Strategic Framework 2016-2030 outlines broad goals for skills development and has dedicated TVET objectives (Solomon Islands Ministry of Education and Human Resource Development, 2016).

	for skills development arrangements.	
	Policy addresses the development needs and limitations of the national labour market.	New vocational scholarships exist based on Labour Market Information and development requirements (Solomon Islands Ministry of Education and Human Resource Development, 2019).
REGULATION - Regulatory arrangements are robust and enable effective labour market and programme outcomes	There are robust evidence-based criteria designed to drive and improve educational performance.	SITESA are implementing a provider strengthening initiative to increase the capabilities of institutions – this includes their reporting and self-monitoring capability (Solomon Islands Ministry of Education and Human Resource Development, 2019). SITESA is tasked with registration and monitoring of providers. Its legal mandate is to allow participation from providers against the Solomon Islands Qualifications Framework and Quality Standards, though these criteria are not yet fully developed so evaluation of their quality is not possible.
	Educational performance criteria are clear, evidence based and support learner achievement and inclusion .	National education performance criteria are more developed for general education activities than for vocational training or workplace learning. Education performance criteria are described in the 2019 MEHRD Performance Assessment Report (Solomon Islands Ministry of Education and Human Resource Development, 2019) which describes the data available on education indicators over the 2016-2020 period, consistent with the National Education Action Plan period.
	The participation of providers in IT is managed to remove or reduce harms to learners' health, safety, and educational welfare.	Institutional providers of Industry Training are managed by SITESA. Workplace participation requirements were not identified.
	Educational performance is effectively monitored and managed in accordance with	Educational performance monitoring is more effective in Solomon Islands institutions than in workplaces. Workplace providers of industry training in the current apprenticeship model are poorly monitored, if at all.

	educational performance requirements.	NTTTU validation or moderation strategies were not present at 2014 (Australian Council for Educational Research and Scope Global, 2014). Minimal strategies in place to quality assure training and assessment in RTCs (Australian Council for Educational Research and Scope Global, 2014). Unclear responsibilities here with the newly established SITESA taking over quality assurance functions for programmes, but the department of labour retaining some monitoring of apprenticeships – visiting workplaces to ensure apprenticeship arrangements are quality and meet legal requirements. The department of Labour identified that they are only able to test students and assess whether workplaces meet minimum standards; they would like to extend this to address and monitor standards too. SITESA, or in future other recognised providers, will assess on job performance too.
	There are clear, fair, and transparent processes and systems to support learner and provider participation and management.	While the system is in a state of change, participation and management of providers and learners is or will be assessed by set criteria and SITESA and MEHRD are working with providers to build capability and effective systems (Solomon Islands Ministry of Education and Human Resource Development, 2019).
REGULATION - Programmes and qualifications are well articulated and responsive to learners' needs and capabilities	Qualification and programme design requirements are clearly articulated and support effective programme outcomes.	SITESA will be responsible for the accreditation of tertiary qualifications. Programme design requirements were not identified in this research. Participants in our research identified mixed qualities of graduates from different formal providers.
	Qualifications are aligned with labour market needs.	SITESA's mandate explicitly mentions increased labour market relevance. National trade testing training and certification unit (NTTTU) have an Industry Standard Advisory Group (ISAG) to increase partnerships between industry, providers, and government (labour division managing apprenticeships) however the group lacks policy guidance and doesn't work well.

		National Trade Testing Training Certificate (NTTTC) is based off ILO derived skill sets. These are given to RTCs to train to but several recently uplifted RTCs do not teach to this framework and are therefore not assessable by Department of Labour. It is unclear how relevant these skill sets are to industry however these are the primary assessment tool for the current apprenticeship scheme. Some perspectives from our research identified the trades skills certificates as low value to the labour market. Some participants in the research identified SINU courses as not relevant to industry needs.
	Programmes are well resourced and support the attainment of the programme learning objectives and standards.	Most funding for providers currently goes into operating costs, more funding is needed to develop training facilities and procure essential equipment. SITESA will be reviewing the financing of programmes in the tertiary sector. Funding for providers is low and is met through significant student fees. Imbalanced given the emphasis on scholarships from the government.
	Programme progression pathways facilitate effective learning and career advancement.	SITESA is underway with developing a Solomon Islands National Qualifications Framework that is as regionally aligned as is practical. Some SINU courses are also aligned with the Australian Qualifications Framework and the Pacific Regional Reference Framework. Pathways from work-based programmes into higher levels of formal education in the Solomon Island are light.
FUNDING - Funding systems provide the incentives and	Funding systems provide equitable access to learning.	Increased emphasis on scholarships in recent years – SITESA manages tertiary scholarships.

support needed to sustain participation by learners and stakeholders	Funding incentives are designed to maximise sustainable participation by learners and employers.	New Scholarships policy acknowledges the three levels of scholarships – Merit, Constituency, and Cost-sharing (Solomon Islands Ministry of Education and Human Resource Development, 2016). Some participants in our research identified that employers should be contributing more to the costs of work-based learning programmes that they are involved in – apprenticeships through SINU and other providers. Opportunities for practical workplace learning are low. SINU in some cases have had to create opportunities through facilities maintenance for students – could indicate that incentives are not effectively aligned or that opportunities are generally low.
FUNDING - Funding systems drive and sustain consistent and effective provider performance	Providers can access the funding required to sustain performance.	Providers may not have effective funding but evidence was mixed. Learners have access to effective scholarships in general education and work-based learning. Foundational funding for salaries and grants are provided for RTCs. CBTCs often rely on community funding methods. SIARTC is putting a proposal together with MEHRD for more funding for these institutions.
	National investment in WBL takes national and labour market needs and priorities into account.	Reform of the Solomon Islands Tertiary education sector puts SITESA as the coordinator of funding requirements for the sector; this will include ensuring funding from government budget allocations is determined based on labour market need. It is unclear how this is happening, or if this is happening now as SITESA is only recently established. At 2019, investment per student in formal TVET programmes was nearly in parity with secondary education (Solomon Islands Ministry of Education and Human Resource Development, 2019).

DESIGN & DELIVERY - Programmes and qualifications are relevant to labour market and learner aspirations	Employers and social partners are engaged in designing, approving, and reviewing qualifications.	SINU has a full time industry engagement coordinator. NTTTU has the ISAG to coordinate between industry, providers, and government (the labour department). Generally, our research found the programmes were not relevant to industry needs. Therefore, there is a disconnect occurring here. ISAG was found to be ineffective and it is unclear as to the role of the SINU industry engagement coordinator.
	Qualifications are aligned to national and international qualification frameworks.	Multiple pathways exist into formal training providers however there are limited pathways within the formal system. SITESA development of the SIQF will address the alignment of standards/qualifications and the development of effective pathways in the coming years. It was not identified in this research how far into the development process the government is.
DESIGN AND DELIVERY - Delivery of learning and assessment is effective, efficient and addresses the educational welfare of students.	Programme teaching and learning design and management support the achievement of programme learning outcomes.	Not enough evidence identified to effectively evaluate teaching and learning methods. It should be noted that inconsistent delivery outcomes between providers may indicate low levels of reliability in these methods or inconsistency of the methods.
	Programme learning design support ongoing learner progression. .	Insufficient information to evaluate scaffolding of programmes and learning methods.
	Programme design and delivery is inclusive and address the learning requirements of all its learners.	Insufficient information to fully evaluate the inclusiveness of programme design and delivery. No regulation for inclusive training. Inclusive education implementation and monitoring committee has been put together within MEHRD.

		Disadvantaged groups are underrepresented in TVET (Australian Council for Educational Research and Scope Global, 2014). Little is happening in the Solomon Islands to make skills training more inclusive of vulnerable or marginalised groups. Some RTCs are providing training for learners with disabilities.
	Teachers and trainers have the knowledge and skills required to teach the programme.	Teachers and trainers are of mixed quality in the Solomon Islands TVET sector. Some participants in our research identified low quality trainers within some RTCs. Aid programmes that have delivered training to teachers and trainers in recent years have been very successful. Difficult to provide CPD opportunities for trainers in institutions. Industry experience can be out of date. Often, international trainers are brought in to provide short term skills development. There is a shortage of skilled trainers particularly in specialised construction activities such as RWASH.
	Programmes are resourced in accordance with their design and teaching requirements.	Recent full TVET scholarships have been introduced by the Solomon Islands Government.
	Learner recruitment ensures that learners have the capabilities and aspirations required for successful completion.	NTTTC screens applicants for the apprenticeship scheme. SINU and RTCs have mixed entry requirements, from prerequisite academic achievements to age requirements in some instances for RTCs.
	Learners' prior experience and knowledge is recognised for accreditation and progression	SINU now assess prior knowledge and skills. Informal skills development is important to industry in the Solomon Islands. Department of Labour and the NTTTU are working on a policy to improve their

		recognition of non-formal learning. Upskilling that occurs in industry is often not recognised formally. This competence is not acknowledged by procurement teams and so workers continue to be brought in for special competences that buyers are not aware of in the Solomon Islands. MEHRD have recently established the community education department responsible for the informal and non-formal community training sector that is prominent in the Solomon Islands.
	Assessments are valid, sufficient, and fair, and avoid overburdening learners.	Insufficient information to assess the validity of assessments. Industry has raised concerns about the assessment of the apprentices from the NTTTC. It is unclear whether this persists following increased activity from NTTTC to improve apprentice assessment in the workplace. Providers who offer apprenticeships are tasked with assessment of workplace and off-job competences. Some perspectives from the research indicate that competency-based assessment in the workplace is not accurate and needs improvement.
	Design of programmes integrates traditional knowledge and skills where these support programme outcomes.	RTCs and CBTCs serve varied purposes within their communities, however insufficient information was identified to evaluate the consideration of traditional knowledge and skills in programmes. These training centres are embedded within communities and their contexts.
WORKFORCE DEVELOPMENT - National labour market and	There are rigorous and effective processes for identifying labour market needs and trends.	Some evidence in the research identified that the department of labour had a close understanding of industry needs through the ISAG, Apprenticeship Board, and their donor supported activities, however the effectiveness of these systems was not established in the research. Some participants identified the ISAG as ineffective.

workforce development needs are recognised and addressed		Generally, the research identified that there was a poor tracking and monitoring of the construction workforce. There was a lack of understanding of the current skills in the labour market, a lack of graduate tracking and understanding how training occurs in the industry as a result. No systematic means to identify labour market needs and trends. SITESA are mandated to have a role in this, however no results have been identified in this area yet. SITESA does administer labour market relevant vocational scholarships (Solomon Islands Ministry of Education and Human Resource Development, 2019) however the methods for establishing relevance were not identified.
	National workforce development priorities and plans are developed in consultation with key labour market stakeholders.	Insufficient evidence to evaluate engagement with stakeholders in national workforce development priorities and planning. SITESA will have a role in this in future.
	National workforce development priorities inform the development of workforce investment.	Insufficient evidence to evaluate the impacts development priorities have on workforce investment. SITESA will be a source of this information In future.
WORKFORCE DEVELOPMENT - All stakeholders are engaged and contribute effectively to workforce development	Industry training is promoted and supported as a viable and valuable occupational choice.	Some initiatives to promote inclusion issues in the country: Youth@Work, Solomon Islands People with Disabilities, Womens groups, etc. However, insufficient information was identified to evaluate parity of esteem issues and how industry training is promoted within the country. SITESA should have a function to increase participation in tertiary education, including work-based learning, but it is unknown what work is underway.
	Stakeholders are provided the support and incentives they need to participate fully in the IT system.	Artificial incentives other than funding were not identified in the research. Scholarships were identified as a key source of funding for participation of learners

		and donor activities and funding were important means of support for the system and its providers.

Table 29: Evaluation of Tokelau alignment with identified indicators of successful industry training systems.

TOKELAU		
SUCCESS FACTOR	**INDICATOR**	**EVALUATION**
POLICY & COORDINATION - Policy is evidence based and responsive to national, labour market and learner needs	Policy is continually refreshed through targeted evidence-based research.	Tokelau is a self-administering territory of NZ. Some NZ policy applies within Tokelau however only where specifically referenced and with Tokelauan consent (UNESCO, 2010). Tokelau has its own political system and the power to enact policy through the General Fono however it was not identified whether policy is based on evidence-based research.
	Government has a culture of continual improvement.	Insufficient information to evaluate culture of continuous improvement. National strategic plan 2016-2020 lists the development of a culture of continuous improvement as a goal but the outcome of this is unclear (Tokelau Government, 2016). National strategic plans are put forward every 5 years.
	Impact of policies is evaluated, and lessons integrated into policy.	Monitoring and Reporting Frameworks for the National Strategic Plans are established (Government of Tokelau, 2016).
	Budgets are allocated in line with stakeholder need and programme requirements.	General Fono manages the budget allocation. The majority of its budget comes from international donor countries; of these NZ makes up the significant majority (92% at 2015) (New Zealand Ministry of Foreign Affairs and Trade, 2015). Low economic governance capabilities within Tokelau have been identified (New Zealand Ministry of Foreign Affairs and Trade, 2015).
	Policies align with regional cooperation initiatives and agreements	Tokelau is a self-administering territory of NZ and has close partnerships with Samoa and other Pacific Island Countries. Tokelau is increasingly moving toward political self-reliance however is still dependent on regional cooperation for budget and

		technical assistance (New Zealand Ministry of Foreign Affairs and Trade, 2015). This is reflected in national policies.
POLICY & COORDINATION - Skills policy is well articulated across the policy and governance spectrum, and representative of stakeholders needs and capabilities	Policy identifies all key stakeholders, and addresses their needs, contexts, and capabilities.	There is no skills development policy in Tokelau. Being a self-administering territory of NZ, Taupulega (village councils) manage the governance, resourcing, and management of education (New Zealand Government Education Review Office, 2014). In general education, roles and responsibilities of the Taupulega and other stakeholders were found to be unclear (New Zealand Government Education Review Office, 2014).
	Policy establishes clear aims, principles, and accountabilities for skills development arrangements.	There are no policies for skills development. Though, there is interest in developing these arrangements.
	Policy addresses the development needs and limitations of the national labour market.	General policy is strongly focused on the limitations of the local economy and labour market (Pacific Islands Legal Information Institute, 2021). There is no skills development policy in Tokelau.
REGULATION - Regulatory arrangements are robust and enable effective labour market and programme outcomes	There are robust evidence-based criteria designed to drive and improve educational performance.	Criteria for provider participation were not identified in this research. Department of Education in Tokelau establishes national standards and monitoring systems for education however this is currently limited to general education in schools. They, with the Taupulega, can determine participation of providers. There are three schools in Tokelau and the only private formal training is through a USP campus.
	Educational performance criteria are clear, evidence based and support learner achievement and inclusion .	No work-based learning occurring. Department of education is responsible for establishing national standards for education sector but the specific standards were not identified in this research.

	The participation of providers in IT is managed to remove or reduce harms to learners' health, safety, and educational welfare.	No industry training provision in Tokelau. Providers in Tokelau do not provide any work-based learning opportunities. No private industry to provide workplace learning – there is only the Aumaga (men's working groups).
	Educational performance is effectively monitored and managed in accordance with educational performance requirements.	Taupulega are tasked with monitoring schools in Tokelau. USP campus self-monitors and reports to the government – being owned by regional governments including Tokelau. 2012 review of Taupulega governance found that management of education was poor (Government of Tokelau, 2012).
	There are clear, fair, and transparent processes and systems to support learner and provider participation and management.	Education is compulsory and free in Tokelau up to age 16 (UNESCO, 2010). After this, government-administered scholarships are available for students to continue learning in overseas institutions based on highly competitive national examination results. Very few receive scholarships and those who do not are often recruited into the local working groups or must privately fund their studies.
REGULATION - Programmes and qualifications are well articulated and responsive to learners' needs and capabilities	Qualification and programme design requirements are clearly articulated and support effective programme outcomes.	School curriculum is designed by the Department of Education based on the NZ curriculum. It is contextualised to the Tokelauan context. No work-based learning occurs in Tokelau.
	Qualifications are aligned with labour market needs.	There are no work-based learning qualifications in Tokelau. Beyond the school curriculum, USP offers a wide range of qualifications by distance but none of these have workplace components. There are engineering programmes offered through USP.

	Programmes are well resourced and support the attainment of the programme learning objectives and standards.	There are no work-based learning qualifications in Tokelau. Schools are resourced through the government's recurring budget which is highly dependent on international finance.
	Programme progression pathways facilitate effective learning and career advancement.	No formal learning pathways exist in the Tokelau construction sector.
FUNDING - Funding systems provide the incentives and support needed to sustain participation by learners and stakeholders	Funding systems provide equitable access to learning.	Funding for learning is largely through highly competitive scholarships to study overseas. Learners who do not receive these are often employed by the local working groups. No formal programmes exist within Tokelau in the construction sector to fund learners for.
	Funding incentives are designed to maximise sustainable participation by learners and employers.	No formal work-based learning programmes in Tokelau. Funding incentivises students to study overseas with scholarships where there are opportunities to develop competences that there are not in Tokelau. Learners who do not receive scholarships must privately fund their studies overseas. No private employers in the Tokelau construction sector.
FUNDING - Funding systems drive and sustain consistent and effective provider performance	Providers can access the funding required to sustain performance.	Schools in Tokelau and the USP campus are sufficiently funded through the Government of Tokelau.
	National investment in WBL takes national and labour market needs and priorities into account.	Previous efforts have been made to establish school-based TVET transition programmes; mainly for those wo could not access the year 12 and 13 curriculum through distance education at USP. These could not be sustained due to a lack of trainers for the programmes and have now been replaced with foundation literacy programmes.

		Currently no national investment in work-based learning.
DESIGN & DELIVERY - Programmes and qualifications are relevant to labour market and learner aspirations	Employers and social partners are engaged in designing, approving, and reviewing qualifications.	No work-based learning qualifications in Tokelau.
	Qualifications are aligned to national and international qualification frameworks.	School and USP programmes are aligned with regional frameworks: school curriculum is aligned with the NZ school curriculum and USP programmes are regionally recognised. These programmes do not have effective pathways into or within the Tokelau construction sector.
DESIGN AND DELIVERY - Delivery of learning and assessment is effective, efficient and addresses the educational welfare of students.	Programme teaching and learning design and management support the achievement of programme learning outcomes.	No work-based learning programmes in Tokelau.
	Programme learning design support ongoing learner progression. .	No work-based learning programmes in Tokelau.
	Programme design and delivery is inclusive and address the learning requirements of all its learners.	No work-based learning programmes in Tokelau.
	Teachers and trainers have the knowledge and skills required to teach the programme.	No work-based learning programmes in Tokelau. A 2011 study noted a shortage of teachers for general education in Tokelau (UNESCO, 2010), in part due to the requirement to be bilingual.

	Programmes are resourced in accordance with their design and teaching requirements.	No work-based learning programmes in Tokelau.
	Learner recruitment ensures that learners have the capabilities and aspirations required for successful completion.	No work-based learning programmes in Tokelau.
	Learners' prior experience and knowledge is recognised for accreditation and progression	No work-based learning programmes in Tokelau. No formal recognition of prior learning or current competence, though Aumaga members are, somewhat inconsistently, promoted based upon previous experience and overseas qualifications.
	Assessments are valid, sufficient, and fair, and avoid overburdening learners.	No work-based learning programmes in Tokelau.
	Design of programmes integrates traditional knowledge and skills where these support programme outcomes.	No industry training programmes in Tokelau. General education curriculum framework identifies traditional approaches to pedagogy and emphasises a traditional and cultural Tokelauan curriculum strongly throughout (Government of Tokelau, 2006).
WORKFORCE DEVELOPMENT - National labour market and workforce development needs are recognised and addressed	There are rigorous and effective processes for identifying labour market needs and trends.	There are no regular or systematic processes for identifying gaps in current construction capacity and capability in Tokelau. Planning is project-based: when there is a large construction project that goes beyond the capabilities of the local working groups, international contractors are brought in to fulfill the requirements.
	National workforce development priorities and plans are developed in	Insufficient information to evaluate any workforce development activities in Tokelau. Education strategies state teacher development and the development of department of education staff as important. However, little information regarding construction

	consultation with key labour market stakeholders.	workforce planning was identified. Taupulega are involved in the assignment of local working groups based upon needs. When skills are not identified within the local working groups, they are contracted from overseas. Taupulega are embedded community groups who understand the needs of the population, but no workforce development planning functions were identified in this research.
	National workforce development priorities inform the development of workforce investment.	No workforce development planning identified in the Tokelauan construction sector. Investment in local working group salaries is not managed in a systematic way. Investments in local working groups come from the Government of Tokelau in the form of salaries.
WORKFORCE DEVELOPMENT - All stakeholders are engaged and contribute effectively to workforce development	Industry training is promoted and supported as a viable and valuable occupational choice.	No industry training in Tokelau to promote though participants in our research identified recognizing informal and workplace learning as important. Approximately 12% of employed persons in Tokelau in 2016 were technicians or trade workers (Government of Tokelau and Statistics New Zealand, 2016).
	Stakeholders are provided the support and incentives they need to participate fully in the IT system.	No industry training system in Tokelau to engage in.

Table 30: Evaluation of Tonga alignment with identified indicators of successful industry training systems.

TONGA		
SUCCESS FACTOR	**INDICATOR**	**EVALUATION**
POLICY & COORDINATION - Policy is evidence based and responsive to national, labour market and learner needs	Policy is continually refreshed through targeted evidence-based research.	2021/2022 Budget describes the implementation of a review of the entire education system; a review of the Ministry of Education's Strategic Plan and Curriculum; and a review of Financing options and financial sustainability (Government of Tonga, 2021) – in line with the objectives of the 2004-2019 Education Policy Framework (Tonga Ministry of Education, 2004). Tonga does not have dedicated skills formation policies that incorporate industry training models. TVET is explicitly mentioned in the Education Act 2013 though and apprenticeships and informal learning are included in their definition of TVET (Education Act 2013). This act describes the functions of the Ministry to perform curriculum reviews of general education but does not mention policy reviews. Insufficient information to evaluate the review of education policy in Tonga.
	Government has a culture of continual improvement.	2004 Education Policy Framework outlined the intention to move to a culture of information-based decision making and evaluation of the sector and initiatives with clear and effective indicators (Tonga Ministry of Education, 2004). It was not evident to what level this framework has been implemented. Tonga National Qualifications and Accreditation Board (TNQAB) Guidelines for Community Education in Tonga describe recognition processes for non-formal and non-accredited learning in Tonga to promote continuous improvement in the sector (Tonga National Qualifications and Accreditations Board, 2018).

	Impact of policies is evaluated, and lessons integrated into policy.	2004 Education Policy Framework outlined the intention to move to a culture of information-based decision making and evaluation of the sector and initiatives with clear and effective indicators (Tonga Ministry of Education, 2004). It was not evident to what level this framework has been implemented. The role of evaluator of the education system is not clear. Tonga National Qualifications and Accreditation Board is limited to accreditation and monitoring, it does not evaluate the system (Australian Council for Educational Research and Scope Global, 2014). There is a lack of a cohesive approach to evaluation of the education system. The 2021/2022 budget has included provisions for a review of the Tongan education system, the Ministry of Education and Training's strategic plan and curriculum, and the financial sustainability of the system (Government of Tonga, 2021).
	Budgets are allocated in line with stakeholder need and programme requirements.	Education is a Government Priority Agenda in the 2021/2022 budget under the 'People Focus' (Government of Tonga, 2021). 2021 had the government provide an education stimulus to support international students stranded due to COVID-19 border closures to return and to pay one-term's worth of school fees for secondary school students. Donor support for education continues; NZ and Australia are significant international donors. Education Act 2013 states that the Ministry of Education and Training should work closely with employers to identify needs and provide adequate resources for training providers (Education Act 2013)
	Policies align with regional cooperation initiatives and agreements	Tonga Strategic Development Framework 2015-2025 identifies the need to improve education offerings and encourage lifelong learning in both academic and vocational streams that enable opportunities domestically and internationally (Government of Tonga, 2015). The current 2021/2022 budget identifies the need to understand how the Tonga

		Strategic Development Framework is relevant to regional and global frameworks; this budget also identifies the priority to have stronger collaboration with regional and global organisations in the development of a new National Security Policy encompassing, among many things, education (Government of Tonga, 2021).
POLICY & COORDINATION - Skills policy is well articulated across the policy and governance spectrum, and representative of stakeholders needs and capabilities	Policy identifies all key stakeholders, and addresses their needs, contexts, and capabilities.	Education Act 2013 identifies training providers and employers as well as their roles in the design and delivery of programmes; a TVET advisory committee is also recommended (Education Act 2013). However, the role of industry in TVET is not clearly defined (Australian Council for Educational Research and Scope Global, 2014). Tonga Strategic Development Framework 2015-2025 acknowledges the inputs of Church and other NGO organisations in the Tongan education sector (Government of Tonga, 2015). Also, this framework identifies the need to understand and agree on the division of labour needed within government to lead the development strategy.
	Policy establishes clear aims, principles, and accountabilities for skills development arrangements.	Education Act 2013 clearly states TVET responsibilities of the Ministry of Education and Training (Education Act 2013). No dedicated skills development policy exists however TVET, including apprenticeships and non-formal learning, is mentioned in the Education Act 2013.
	Policy addresses the development needs and limitations of the national labour market.	Tonga Strategic Development Framework 2015-2025 describes challenges of development for the local economy and labour market (Government of Tonga, 2015).
REGULATION - Regulatory arrangements are robust and enable effective labour market and	There are robust evidence-based criteria designed to drive and improve educational performance.	Tonga National Qualifications and Accreditation Board (TNQAB) Quality Assurance Policies describe relatively strong but broad provider and programme accreditation criteria though there is potential for more specificity to reduce evaluator discrepancies (Tonga National Qualifications and Accreditation Board, 2009).
	Educational performance criteria are clear, evidence	Tonga National Qualifications and Accreditation Board (TNQAB) Education Performance Criteria could be more specific; current accreditation criteria for providers and programmes are broad and leave room for variance in the judgements

programme outcomes	based and support learner achievement and inclusion .	of performance (Tonga National Qualifications and Accreditation Board, 2009). See Tonga National Qualifications and Accreditation Regulations 2010 (Tonga National Qualifications and Accredition Regulations 2010). Tonga Strategic Development Framework 2015-2025 notes a lack of reliable data collection from the government; it proposes key performance indicators for the national framework but education indicators are only represented through reduced drop-out rates, maintained high literacy rates, and partially through unemployment rates (Government of Tonga, 2015). Ministry of Education and Training assesses national general educational performance against typical indicators such as attainment and literacy rates within general education, however the collection of tertiary education was not identified in this report (Tonga Ministry of Education, 2014).
	The participation of providers in IT is managed to remove or reduce harms to learners' health, safety, and educational welfare.	Tonga National Qualifications and Accreditation Board (TNQAB) manage participation of providers in the system; this includes workplace learning providers (Tonga National Qualifications and Accreditations Board, 2018).
	Educational performance is effectively monitored and managed in accordance with educational performance requirements.	Tonga National Qualifications and Accreditation Board (TNQAB) are tasked with monitoring providers and programmes however it is unclear how effectively this is occurring. TNQAB Risk and Compliance department have a series of tools and criteria to rate and act upon risks internally within TNQAB and externally with accredited providers, rated against likelihood and impact (Tonga National Qualifications and Accreditation Board, 2017). This includes failure to meet TNQAB requirements and plans; providers are required to perform self-assessments of quality and compliance with regulations that TNQAB audit at least every two years. It was not identified whether this audit period is adjusted based upon compliance risk of particular providers.

		Complaints procedures for providers and TNQAB are handled by the TNQAB with an established process. Tonga Strategic Development Framework 2015-2025 notes a lack of reliable data collection from the government (Government of Tonga, 2015). Internal moderation is required for provider accreditation; National external moderation systems are stated to be in process as at 2009 (Tonga National Qualifications and Accreditation Board, 2009) but it is unclear how far through implementation this initiative is.
	There are clear, fair, and transparent processes and systems to support learner and provider participation and management.	TNQAB provide guidance to providers, including non-formal and non-accredited providers, to achieve accreditation. Risk management for providers is supported by TNQAB. Education Act 2013 states that the Ministry of Education and Training should encourage access and equitable participation from, some explicitly mentioned, marginalised and disadvantaged groups (Education Act 2013).
REGULATION - Programmes and qualifications are well articulated and responsive to learners' needs and capabilities	Qualification and programme design requirements are clearly articulated and support effective programme outcomes.	Tonga Qualifications Framework (TQF) requires accredited qualifications to have clear outcomes (Tonga National Qualifications and Accreditation Board, 2009). TNQAB is responsible for accreditation processes for programmes; processes for academic and workplace programmes and providers are the same and there are clear criteria set out for programme accreditation (Tonga National Qualifications and Accreditation Board Act 2016). Note that a 'TNQAB Guidelines for Programme Accreditation' document is referenced but was not located. Education Act 2013 states that the Ministry of Education and Training should establish occupational standards (Education Act 2013) through it was not identified whether this is being implemented.
	Qualifications are aligned with labour market needs.	Education Act 2013 states that "Training systems should not operate in isolation of labour market demand and with little or no employer participation." But it is unclear the

		degree to which programmes are aligned with labour market requirements. This research identified that a building code exists in Tonga but it is not well enforced; this may reduce its integration in the design of programmes. Participants in this research also identified a gap between the skills of graduates and industry requirements.
	Programmes are well resourced and support the attainment of the programme learning objectives and standards.	Insufficient information to evaluate whether programmes have the resources to support learning objectives and standards.
	Programme progression pathways facilitate effective learning and career advancement.	Tonga Qualifications Framework does not mandate graduate pathways to be described in the accreditation of their programmes (Tonga National Qualifications and Accreditation Board, 2009).
FUNDING - Funding systems provide the incentives and support needed to sustain participation by learners and stakeholders	Funding systems provide equitable access to learning.	2021/2022 Budget outlines a plan to evaluate financing options and financial sustainability of the education sector (Government of Tonga, 2021). Significant international funding is directed to scholarships for learners however these are mostly for academic education rather than work-based learning (Government of Tonga, 2015). Education Act 2013 outlines government scholarships (Education Act 2013).
	Funding incentives are designed to maximise sustainable participation by learners and employers.	2021/2022 Budget outlines a plan to evaluate financing options and financial sustainability of the education sector (Government of Tonga, 2021). Some employers in our research described being unable to fund workplace learning activities and noted a lack of government

FUNDING - Funding systems drive and sustain consistent and effective provider performance	Providers can access the funding required to sustain performance.	2014 DFAT report into TVET financing in the Pacific identified that funding levels were insufficient to sustain quality TVET provision (Australian Council for Educational Research and Scope Global, 2014). It is unclear whether these conditions remain. The same report found that funding levels for providers are not linked to input costs or learner outcomes; in some instances, funding levels are determined by historical trends rather than direct input costs or outcomes of performance (Australian Council for Educational Research and Scope Global, 2014). This can lead to unmet funding needs. Participants in our research stated that funding for church schools was typically lower than non-church schools and was not sufficient to meet their needs. Participants in our research also identified that TVET providers are dependent on government funding to maintain quality outcomes.
	National investment in WBL takes national and labour market needs and priorities into account.	Ministry of Education and Training is mandated under the Education Act 2013 to develop a TVET system that is flexible to national, global, economic, and labour market changes, and to have the required information and options to redirect areas of focus and support in response (Education Act 2013). Allocation of the 2021/2022 education budget has been done based upon Education Policy Framework and National priority areas for funding (Government of Tonga, 2021). Various international projects, notably the Skills and Employment for Tongans project by the World Bank (The World Bank, 2021), are being implemented to address national workforce needs, however it is unclear to what degree these national priorities and labour market trends impact on WBL investment.
DESIGN & DELIVERY - Programmes and qualifications are	Employers and social partners are engaged in designing, approving, and reviewing qualifications.	TNQAB have implemented guidelines for the development of national qualifications (Tonga National Qualifications and Accreditation Board, 2018). These guidelines mandate the use of Industry Training Advisory Councils (ITACs) to help design and develop the qualification, including occupational standards.

relevant to labour market and learner aspirations		Education Act 2013 states the Ministry of Education and Training will enable employers to have greater input in the graduate outcomes of programmes (Education Act 2013). A potential barrier to industry training exists as providers who would like to offer workplace learning must be accredited, a process that limits employers enrolling employees into industry training qualifications.
	Qualifications are aligned to national and international qualification frameworks.	Tonga Qualifications Framework is a step towards improved formal learning pathways (Tonga National Qualifications and Accreditation Board, 2009) however it has not reached the scale where it can provide wide ranging formal progression pathways. TNQAB guidelines for National Qualification Development mandate the inclusion of articulated progression pathways in the qualification description (Tonga National Qualifications and Accreditations Board, 2018).
DESIGN AND DELIVERY - Delivery of learning and assessment is effective, efficient and addresses the educational welfare of students.	Programme teaching and learning design and management support the achievement of programme learning outcomes.	Industry training programmes are not present. Provider TVET programme learning methods are diverse and national standards, by design, do not mandate teaching methods. They do however list resources required for teaching/training the unit. Insufficient information to evaluate this indicator; currently, few national qualifications exist and none in construction.
	Programme learning design support ongoing learner progression. .	Registered and accredited qualifications are scaffolded and supported by the Tonga Qualifications Framework. Insufficient information to evaluate the scaffolding of learning methods.
	Programme design and delivery is inclusive and address the learning requirements of all its learners.	Marginalised and disadvantaged learners were reported to have lower access to training in this research, though results were mixed. TNQAB is working to recognise and incorporate the informal sector into the current education system. Community training programmes exist which target individuals with disabilities.

		Participants in the research identified the inclusion of these groups as the government's role, however providers are making steps toward inclusivity. Student teacher ratios for government providers limit access. Some providers are offering part time courses; some church providers are focused on increasing access.
	Teachers and trainers have the knowledge and skills required to teach the programme.	Participants in the research identified an insufficient number and quality of trainers in Tonga for construction; providers tend to bring in experts from overseas. This does not mean that skilled trainers do not exist in Tonga, but that they tend to be in industry rather than in education. Ministry of Education and Training 2019/20-2021/22 Corporate plan includes performance indicators for teacher registration and quality improvement activities, though this is for all education not industry training. There are some provisions for the improved performance measurement of government TVET providers (Tonga Ministry of Education and Training, 2019).
	Programmes are resourced in accordance with their design and teaching requirements.	Education Act 2013 states that the Ministry of Education and Training is mandated to appropriately fund government providers and may at its discretion give grants to non-government providers (Education Act 2013).
	Learner recruitment ensures that learners have the capabilities and aspirations required for successful completion.	No industry training programmes to manage participation into. Provider-based programmes have mixed entry criteria; participants in our research described a lack of capacity in key training providers to meet demand. It is unclear whether the recruitment processes are competitive as a result.
	Learners' prior experience and knowledge is recognised for accreditation and progression	Recognition of informal and nonformal learning is an important principle of the Tonga Qualifications Framework (TQF) (Tonga National Qualifications and Accreditation Board, 2009). This is only being completed through provider-based programmes as there are no industry training programmes in Tonga.

	Assessments are valid, sufficient, and fair, and avoid overburdening learners.	TNQAB Quality Assurance Policies list a variety of recognised evidence for assessments of accredited programmes including workplace evidence and prior learning and skills development (Tonga National Qualifications and Accreditation Board, 2009). TNQAB Guidelines for National Qualifications Development state that assessments should be guided by principles of fairness, validity, consistency, and appropriateness to the learning outcomes (Tonga National Qualifications and Accreditations Board, 2018).
	Design of programmes integrates traditional knowledge and skills where these support programme outcomes.	Insufficient information to evaluate the inclusion of traditional knowledge and skills.
WORKFORCE DEVELOPMENT - National labour market and workforce development needs are recognised and addressed	There are rigorous and effective processes for identifying labour market needs and trends.	Participants in the research stated that there is no national monitoring of construction graduates or learners in Tonga. Ministry of Education and Training 2019/20-2021/22 Corporate Plan describes a planned major reform to strengthen the TVET sector, including accurately mapping skills demand and supply with industry support (Tonga Ministry of Education and Training, 2019).
	National workforce development priorities and plans are developed in consultation with key labour market stakeholders.	Ministry of Education and Training 2019/20-2021/22 Corporate Plan describes a planned major reform to strengthen the TVET sector, including accurately mapping skills demand and supply with industry support (Tonga Ministry of Education and Training, 2019).
	National workforce development priorities inform the development of workforce investment.	National Competence based Programmes are being established through TNQAB; these are demand driven qualifications that must be justified and supported by industry to be developed (Tonga National Qualifications and Accreditations Board, 2018).

WORKFORCE DEVELOPMENT - All stakeholders are engaged and contribute effectively to workforce development	Industry training is promoted and supported as a viable and valuable occupational choice.	Insufficient information to evaluate the parity of esteem between industry training or TVET and academic streams of education. No formal industry training in Tonga.
	Stakeholders are provided the support and incentives they need to participate fully in the IT system.	No formal industry training exists in Tonga. Providers are receiving insufficient funding to sustain quality and sufficient institutional TVET. Participants in this research identified that employers are mostly engaged with industry training however generally have limited capacity to allocate their employees for formal training.

Appendix 6: Success Factors identified in the field research and arranged by system pillars from Table 35

Table 31: Success Factors identified in the field research and arranged by system pillars from Table 35.

	POLICY & COORDINATION
COOK ISLANDS	• Policy and Training should incentivise learners to remain in the Cook Islands.
KIRIBATI	• Policy should exist that covers and advocates for inclusion, caters to industry needs, and equips industry with the tools and machines needed for on-job training. • Coordination nationally to ensure industries are equipped to deliver industry training. • Coordination regionally to determine which parties can provide training to meet industry's needs.
NIUE	• Simple and achievable policies in place for industry training. • Proper coordination and planning, dedicated to industry training with a nominated focal point.
SOLOMON ISLANDS	• Industry has meaningful input into skills development policy. • Projects, policies, and initiatives in industry training are delivered meaningfully in a coordinated way and are evaluated.
TOKELAU	• Stakeholders have strong support for industry training models.
TONGA	• Industry representative bodies or associations exist to drive, formulate, and advocate for industry training. • Government effectively coordinates the system and its stakeholders. • Industry training policy exists and is effective. • Marginalised and disadvantaged learners are empowered and supported to access training. • Stakeholders value industry training and its outputs.
	REGULATION
COOK ISLANDS	• Qualifications should be accredited and relevant professional registrations should exist to maintain quality.

KIRIBATI	• Independent moderation and assessment of workplace learning elements within programmes. • Construction activities should have government regulation to ensure quality. • Work attachments should be coordinated well and have overarching policies in place.
NIUE	• Regulation should be clear and easy to follow. • Institutions delivering training should be accredited. • Qualifications should be accredited to promote labour mobility. • Effective recognition of prior learning (RPL) and Recognition of current competence (RCC) processes exist.
SOLOMON ISLANDS	• Effective building codes should be in place and effectively monitored. • Certification for trade skills should be meaningful and effectively communicate a standard of performance. • Stakeholder performance is effectively regulated and managed. • Regional qualifications or standards that are utilised consider local needs. • Effective recognition of prior learning (RPL) and Recognition of current competence (RCC) processes exist. • Workplace training is well regulated to ensure quality, including workplace assessment.
TOKELAU	• Construction activities are effectively monitored for quality.
TONGA	• Learners have sufficient work ethic to enter industry training programmes: committed, punctual, faithful, et cetera. • Building regulations and policies exist and promote a high standard of practice.
	FUNDING
COOK ISLANDS	• Funding is sufficient to enable learner participation in industry training.
KIRIBATI	• Funding should be sufficient to cover training materials and for industry to afford to employ learners.
NIUE	• Funding should effectively sustain the programmes.

SOLOMON ISLANDS	• Effective funding for workplace learning activities exists, not just for academic or institutional programmes. • Costs are equitably shared between industry training stakeholders.
TOKELAU	• No success factors identified.
TONGA	• Funding is efficient and sufficient to sustain the system.
	DESIGN & DELIVERY
COOK ISLANDS	• Programmes should be designed with effective industry consultation. • Learning pathways into construction trainings should exist from secondary schooling and these should be promoted. • Delivery should acknowledge the difficulties releasing employees for training due to high demands – it should be flexible and have provision out of work hours. • Where skilled trainers do not exist locally, international experts are brought in to develop local capabilities. • Programmes are locally relevant. Where contextualised from international programmes, redundancies in the programme are eliminated. • Foundation skills are integrated into programmes, particularly off-job components to reflect industry need for basic literacies.

KIRIBATI	• Education institutions and employers should coordinate to understand learners' individual needs and health and safety requirements. • On-job learning needs to be **coordinated and planned** so that industry knows what their training responsibilities are (training agreements). • Industry should be involved in programme design. • Inductions for workplace attached students if using a provider driven model. • Delivery staff should have the training needed to provide effective training to diverse learners. • Industry have effective tools to train on-job. • Effective pathways and preparations from secondary school should exist. • Local skills and knowledge are reflected in course designs. Ability to utilise local materials essential for sustainable construction sector in Kiribati.
NIUE	• Facilities for off-job training should exist and be adequately equipped. • Training must meet local industry, national, and stakeholder needs. • Trainers meet local and cultural needs, including bilingualism. • Trainers in industry have the right skills to deliver on-job training and supervision. • Effective formal learning pathways exist. • Learner supports for adult and workplace learners.
SOLOMON ISLANDS	• Teachers and trainers have the right skills to deliver training. • Flexible and blended learning approaches are considered to improve access. • Industry has input into the planning, design, and delivery of programmes. • Life skills and soft skills are integrated into programmes. • Delivery capabilities of rural and community training centres are understood and planning for the informal delivery of key infrastructure skills occurs flexibly, where needed.

TOKELAU	• Construction programmes include more than practical skills as needed by the nation: procurement, leadership, project management, et cetera. • Lifelong learning approach should be taken to recognise the learning that occurs throughout the career – skills of local working groups are regularly updated.
TONGA	• Effective vocational pathways exist from the school system to industry training. • Training on and off job is effectively delivered. • Local context is considered when designing programmes. • Off-job training effectively supports and supplements on-job training. • Sustainable construction methods and materials are used and incorporated into the design of programmes.
	WORKFORCE PLANNING
COOK ISLANDS	• Training should anticipate and plan for future skills requirements and demand, including large infrastructure projects in the context of construction. • Industry should have a group that represents its interests in skills development.
KIRIBATI	• Industry to work with providers to understand skills supply and plan for this. In the instances of government employers in particular. • Strong linkages need to exist between government, training providers, and industry. • Workforce planning at a national level is essential for smaller economies and to strengthen the link between skills supply and demand.
NIUE	• Industry are engaged in all areas of industry training from planning to design and delivery.

SOLOMON ISLANDS	• Procurement of construction contracts should consider skills development opportunities and opportunities for local people at a national level. • Industry has input into training needs. • Regional initiatives consider local needs. • Coordination and planning to bridge the supply and demand of skills, including public skills databases where appropriate.
TOKELAU	• Continuing and future development of the workforce is considered in national planning. • Workforce planning should consider the types and level of competences needed at a national level.
TONGA	• Local economy has the scale to support workplace training activities.

Appendix 7: Field research counts of codes by country

Table 32: Field research counts of codes by country.

	Cook Islands	Kiribati	Niue	Solomon Islands	Tokelau	Tonga	Absolute Count
CURRENT STATE							
C Policy	3	6	3	8	2	4	42
C Regulation	0	9	6	9	5	5	50
C Funding	1	11	6	5	5	10	58
C Delivery	45	39	26	30	13	35	247
C Workforce Planning	7	12	7	12	6	9	71
SUB TOTAL	56	77	48	64	31	63	468
IDEAL STATE							
I Policy	0	1	6	4	0	12	38
I Regulation	1	2	5	13	1	4	41
I Funding	1	2	5	4	0	10	28
I Delivery	15	8	22	9	5	13	99
I Workforce Planning	7	6	7	4	3	5	46
Skills Demand and Supply	38	20	19	32	10	32	218
Participation of learners and vulnerable or marginalised learners	5	32	16	14	3	22	130
SUB TOTAL	67	71	80	80	22	98	600
CHALLENGES AND BARRIERS							
Barriers to entry and participation	26	7	6	8	2	11	89

	Cook Islands	Kiribati	Niue	Solomon Islands	Tokelau	Tonga	Absolute Count
Lack of capacity	11	16	9	10	6	13	84
Challenges to Relevance	12	15	5	11	5	0	71
Challenges to Quality	5	8	7	13	5	6	60
General Challenges	20	5	4	12	4	9	77
SUB TOTAL	74	51	31	54	22	39	381
OPPORTUNITIES							
Regional/Multi-country	16	8	9	9	3	9	73
National	6	11	8	13	2	13	71
SUB TOTAL	22	19	17	22	5	22	144
TOTAL CODES	219	218	176	220	80	222	1593

Appendix 8: Foundation Field Research Tool.

MFAT Industry Training Research: Questions and Prompts

Background

Client

- New Zealand Ministry of Foreign Affairs and Trade (MFAT) has commissioned the Skills Consulting Group (based in New Zealand). The Skills Consulting Group are working with local researchers including myself to gain the required insights.

Research

- Research into work-based learning, including industry training models, in the Pacific Construction Sector. Our focus in on learning through the workplace.
    - Work-based learning referring to education that delivers the knowledge, skills, and attitudes required by industry. Either through a classroom or learning in the workplace.
    - Industry training referring to skills development and learning that is predominantly done on-the-job.
- Additional focuses on the inclusion of disadvantaged and marginalised groups including the informal sector.

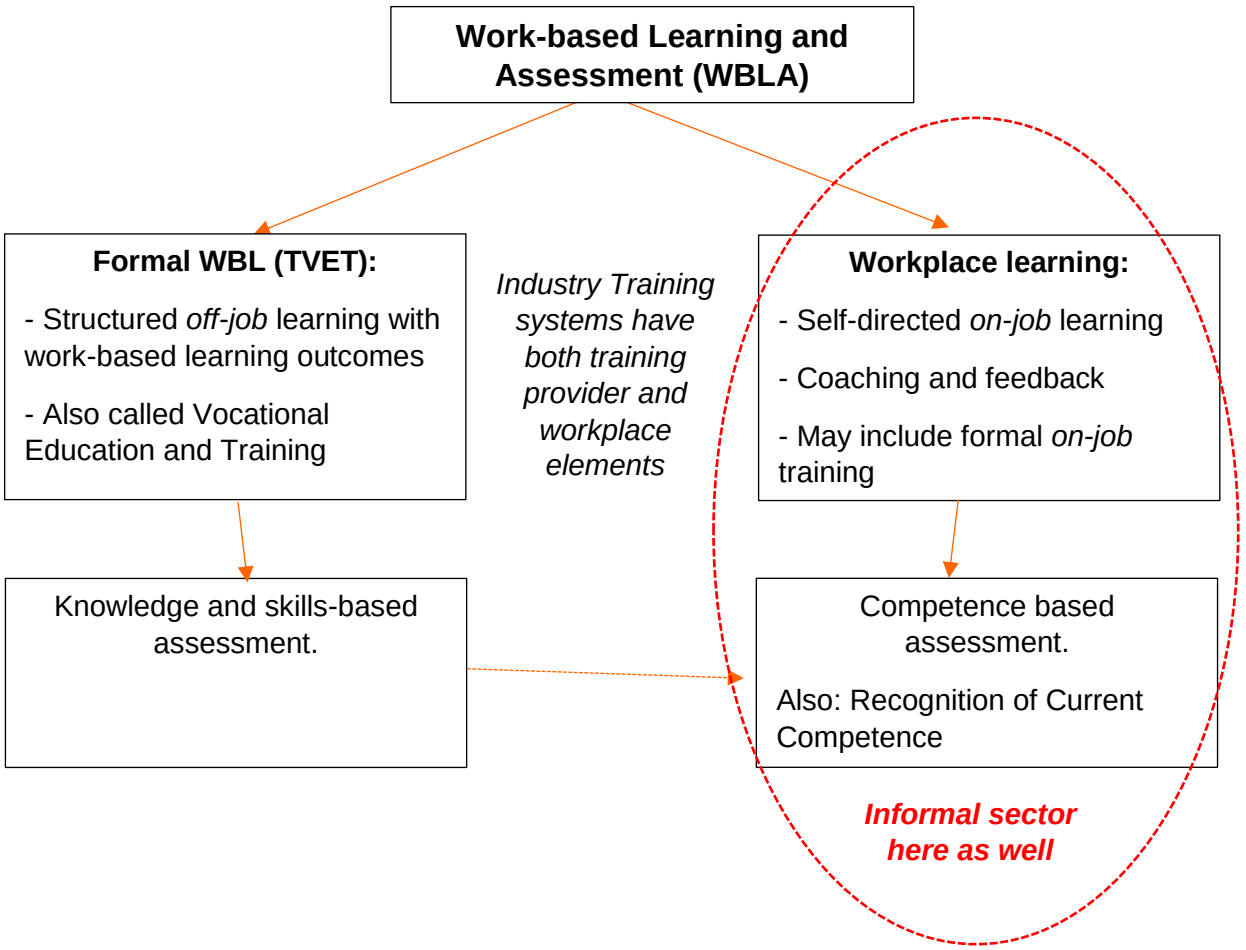
Purpose

- To inform international and national level investment and policy decisions across the Pacific.

Research Questions

1. What models of industry-based training are currently operating in:
    a. The Pacific;
    b. Similar development contexts;
    c. New Zealand and Australia?
2. What are the success factors for industry-based training? What supporting environment or architecture is needed to enable effective delivery of industry-based training in a Pacific context?
3. What barriers exist for Pacific businesses to participate in industry based training, with a focus on the construction sector?
4. What opportunities exist for implementing industry-based training model/s in the construction sector in the Pacific?
    a. What demand and supply exists for skilled and semi-skilled construction workers in the Pacific?
    b. How do the six focus nations in the Pacific compare against the success factors identified in Research Question 2.
    c. What might be needed to create the necessary enabling environment for industry-based training models to be feasible?
    d. Are there benefits to regional or multi-country approaches to this?

Industry Training Conceptual Map



Stakeholders & their Outcomes

Training Providers: income, reputation, increased relevance to industry, more valuable qualifications.

Learners: skills, qualifications, work/income/growth, contribution to family and community.

Industry Training and Skills Development

Nation*:* Deepening workforce capability, development and growth, inc. tax revenue, social cohesion.

Communities*:* increased income security, savings and investment, inc. investment in local facilities.

Employers: Access to skills for growth, inc. labour market predictability/planning.

Interviewee Details

Name/s: _____

Position/s: _____

Organisation/s: _____

Date of Interview: / /

Name of Interviewer: _____

General notes about the interviewee or the interview's context:

Questions and Prompts

1. Please describe the forms of industry training you have knowledge of in [COUNTRY].

We need this to map out the skills development and industry training landscape, this would include all aspects outlined in the conceptual diagram above: TVET/ formal learning, workplace learning, informal skills development, etc.

PROMPTS:

- What policy covers these modes of learning?
- How are disadvantaged or marginalised learners included in these modes of training, if at all?
    - Women? Remote or rural individuals? Youth? Individuals with disabilities? Cultural groups?
- How is informal skills development recognised, if at all?
- What funding is available for these modes of learning?
- How are these modes of learning monitored to ensure quality?
- Who is delivering these modes of learning?
- How are national skill levels monitored?

Notes:

Supplementary question:

1.a. (if they have credible sources or are involved in industry training delivery) W*hat are the numbers of people in each of the of these forms of industry training*?

Estimates are fine. Informal sector should be considered as well. This is needed to understand the scope of the different modes of construction industry training (skills supply).

PROMPTS:

- How are disadvantaged or marginalised learners represented in these modes of training, if at all?
    - Women? Remote or rural individuals? Youth? Individuals with disabilities? Cultural groups?

Notes:

2. *What makes construction Industry Training in [COUNTRY] successful now? And will in the future?*

We would like this question to identify local context for successful training that we can link to common success factors identified by global agencies. We aim to understand any unique and important aspects of their skills development system that enable successful industry training in their context. Also, drawing out insights about how they think their system should operate and, if areas are not operating, how they think they should.

PROMPTS:

- What support is needed from industry training stakeholders? (See stakeholder map above)
- For successful industry training, do you have any comments on:
    - Policy requirements?
    - Funding requirements?
    - Regulatory requirements?
    - Delivery requirements?
    - Workforce planning requirements?
- What, if anything, is needed to support the inclusion of disadvantaged or marginalised learners?
    - Women? Remote or rural individuals? Youth? Individuals with disabilities? Cultural groups?

Notes:

***3.** What are the main challenges faced by the stakeholders in construction industry training?*

Consider the different stakeholders from the stakeholder diagram above.

PROMPTS:

- Challenges could be:
    - Access – including how remote, marginalised, and disadvantaged learners are included/excluded from the system
    - Quality of learning or training
    - Opportunities for graduates
    - Provision of relevant workplace learning by employers
- What actions are needed, if any, to address these challenges?
- What have stakeholders done to address these challenges?
    - Considering all stakeholder groups from the map above, particularly communities and the informal sector.

Notes:

4. *What level of engagement in construction industry training do employers have?*

Here we are trying to establish whether employers are able and/or willing to provide the on-job learning opportunities key to successful industry training. Industry's capacity to train workers and industry's willingness to train workers can be challenges to a successful system.

PROMPTS:

- Does industry advocate for industry training?
- Does industry participate in the design of industry training programmes? Do they want to?
- Does industry provide workplace learning opportunities?
- Does industry provide support for workplace learners?

Notes:

4.a. *What, if anything, is creating barriers to employer involvement in construction industry training?*

Example barriers might be financial constraints, lack of trust in the system, complexity of the system, dissatisfaction with the content of programmes (qualifications not relevant to industry needs), or general labour market factors such as low sector demand.

Notes:

5. *What level of demand exists for skilled and semi-skilled construction workers in [COUNTRY]?*

We are looking to establish the demand for construction skills qualitatively in the absence of any quantitative data. If participants have any data they are willing to share here, it would be valuable.

PROMPTS:

- Are there any areas or occupations with skills gaps? (Skills undersupply)
- Are there any areas or occupations with too many prospective workers? (Skills oversupply)
- How many graduates find employment in the construction sector? Does industry consider them to have the right skills?
- Do disadvantaged or marginalised learners have employment opportunities in the sector?
    - Women? Remote or rural individuals? Youth? Individuals with disabilities? Cultural groups?

Notes:

6. *What are your thoughts on regional or multi-country approaches to industry training in the Pacific construction sector?*

We would like to consider stakeholders thoughts about regional cooperation to skills development. Thinking about the training system pillars (policy, funding, regulation, delivery, and workforce planning), do stakeholders have any opinions about how each of these could be handled regionally?

PROMPTS:

- What do you think could be the benefits of regional or multi-country approaches to work-based learning?
- Do you think there are any risks associated with regional or multi-country approaches to work-based learning?

Notes:

Appendix 9: Industry training models from focus countries in the research

The section below outlines the current models of industry training identified in our Pacific Island focus countries. Note that to understand what industry models exist, or could exist, it is important to look at all elements of the WBL system. These include both the on-job training that exists as well as the off-job training that is occurring; effective industry training models have both of these aspects.

So, the section below outlines whether the country has aspects of formal industry training but extends this further to general constructions skills development systems. This is to better understand how skills are being formed where industry training systems are absent and understand what elements of industry training exist, in part, if full implementation does not exist.

Cook Islands Models

The Cook Islands is currently testing Industry Training models through its government tertiary provider, the Cook Islands Tertiary Training Institute (CITTI). CITTI is offering limited apprenticeships within the hospitality and tourism sector, though currently no robust evaluations of these have been performed. These are being designed and delivered in close contact with industry which is promising.

The government is looking to establish a wider apprenticeship system. *The Cook Islands Economic Development Strategy 2030* outlines a plan to develop an apprenticeship scheme in the Cook Islands (Action 3.14) accessible to both Rarotonga and Pa Enua (Government of the Cook Islands, 2021). The indicative timeframe for this is 2022 with a pilot stated to commence this programme before being extended over a period of three years.

Currently, beyond this small instance of industry training, industry training does not exist within the Cook Islands. Other forms of formal WBL are largely performed by CITTI. CITTI is a formal TVET provider and subsidiary of the Cook Islands Ministry of Education. It has centres throughout the Cook Islands but is based primarily in Rarotonga (Cook Islands Tertiary Training Institute, 2021). CITTI provides both accredited and non-accredited training programmes; accrediting bodies include the CITTI academic board and Cook Islands registering authorities, City and Guilds, and the New Zealand Qualifications Authority (NZQA). CITTI is funded through central government and aid organisations. CITTI also provides Pa Enua (Outer Islands) community training activities to reduce the geographical barriers to training.

The only other tertiary education and training provider is the University of the South Pacific (USP) with a campus on Rarotonga. CITTI is the only construction programme provider in the Cook Islands, however, some engineering related programmes are offered through USP. These construction programmes are short courses; basic trades training programmes that in some instances are integrated with secondary schools; and programmes, such as electrical, carpentry, and plumbing and gas fitting, which are accredited in New Zealand (Scott, 2015).

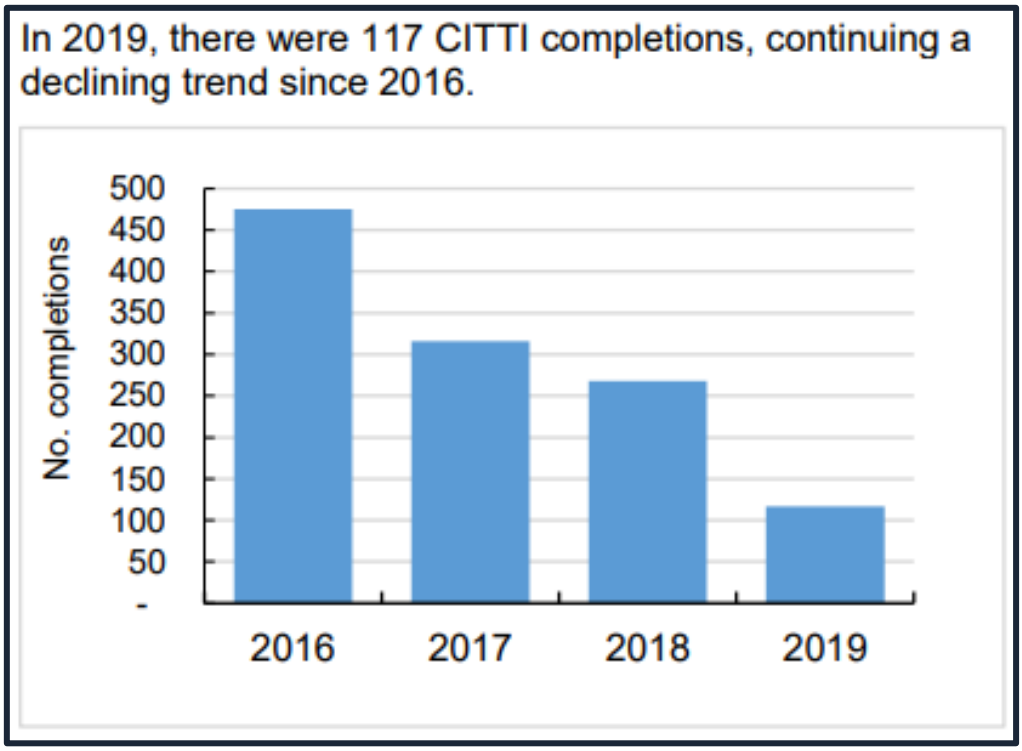


Figure 19: Cook Islands Tertiary Training Institute Total Student Completions (2016-2019)
Source: (Government of the Cook Islands, 2021)

Beyond formal industry training, non-formal training is being provided by industry. Participants in our research identified that industry employers were providing ad-hoc non-formal training to their employees. These trainings are needed to supplement any construction skills acquired through CITTI, indicating that the construction programmes from CITTI are not meeting industry needs. In some instances, employers are bringing in international experts to provide these trainings; other times, employers are providing trainings themselves. Our research suggests that employer non-formal training is widespread. Some employers are also sending their staff overseas to be trained and return to the Cook Islands to upskill other staff. Predominantly, this training is occurring in New Zealand.

Kiribati Models

In Kiribati, there are four tertiary providers, only one is focused on construction skills development. This being the Kiribati Institute of Technology (KIT), a government owned TVET provider that is a division of the Kiribati Ministry of Employment and Human Resource Development (MEHRD). KIT is in partnership with another government owned TVET provider in Kiribati, the Marine Training Centre Tarawa, and two other tertiary education providers exist in Kiribati: the Kiribati Teachers College (KTC) and the University of the South Pacific (USP) Tarawa campus (Australian Government DFAT, 2015).

KIT has flexible learning arrangements and offers both short courses and full qualifications. Core construction courses at KIT include construction, electrotechnology, and plumbing, as well as non-accredited short courses in basic trades skills to meet industry needs.

KIT has some core programmes that approximate industry training models however, they are missing some key elements. The courses run on a model where competency-based training is delivered at KIT for durations of approximately two years. Learners are then placed within

workplaces for a period of approximately one year (Kiribati Institute of Technology, 2021). It should be noted that in Kiribati, these placements are termed ‘apprenticeships’, however, they are more in line with what we would consider to be student attachments or internships. The Apprenticeship Board, managed by MEHRD, regulates these placements, and provides funding for them in the form of scholarships. Workplaces with attached students receive checklists to evaluate learner performance, but they are not coordinated through integrated outcomes. Having coordinated workplace learning is essential to ensure that learners are receiving the right skills and that these are given reliably to consecutive learners.

KIT has a Course advisory committee to collect industry input in the development of programmes, but evaluations of its effectiveness are mixed, with a key issue being the level of training from KIT being too low for industry needs. Some employers within our research identified that they are designing non-formal training and inductions for attached students from KIT as their activities are more specific than what is being provided at KIT.

KIT is accredited by the Educational Quality and Assessment Programme of The South Pacific Community (SPC) and has special agreements in place for accreditation in Australia and New Zealand through recognition of prior learning (RPL) processes performed by registered training organisations in Australia (Kiribati Institute of Technology, 2021). These occur multiple times per year when authorised assessors are brought in from Australia.

KIT is funded through central government and donor funding, notably Australian Aid. Core to the success of WBL in Kiribati is the long-term donor funding and programmes that have built capacity in the sector. The *TVET Sector Strengthening Programme* (TVETSSP) and the *Skills for Employment Program* (SfEP) have invested heavily into creating skills development infrastructure and capacity within Kiribati.

Niue Models

Formal industry training does not exist in Niue. Formal and accredited provision of construction skills is limited to Niue High School (NHS).

NHS offers a multi-skills certificate that has been contextualised from a UNITEC Institute of Technology, New Zealand programme. The multi-skills certificate is a two-year basic trades skills training programme acting as a practical pathway for students from NHS. The programme contains theoretical and practical off-job components but does not contain any time in the workplace or on-job learning. It has been offered for three years at the time of this research so extensive evaluations are unavailable, but the Niue government is looking to extend this programme and provide further construction pathways.

NHS also offers another accredited construction skills programme: the building, construction, and allied trade skills (BCATS) programme from New Zealand. This is a pre-trades preparation course offered through New Zealand secondary schools and quality assured by the Building and Construction Industry Training Organisation (BCITO) and accredited by NZQA. As NHS teaches the New Zealand secondary school curriculum, this programme integrates well into their curriculum.

These programmes, in the absence of higher-level construction qualification pathways, are intended to prepare learners for construction programmes in New Zealand, a common destination for training. Due to the close relationship and travel arrangements with New Zealand, learners frequently develop construction skills within New Zealand and use New Zealand programmes including industry training modes. Other common destinations for training include Fiji and Samoa; often through Australia Pacific Training Coalition (APTC) short-term programmes for ad hoc development.

Workplaces also offer non-formal and informal training to their employees to supplement these formal courses and in place of any formal accredited construction training available in Niue.

Outside of the construction sector, workplace experience programmes are being offered through the Niue Chamber of Commerce such as the Youth Employment Scheme too.

Solomon Islands Models

The Solomon Islands provides some industry training in the construction sector through a national trades certification system.

The National Trade Testing, Training, & Certification Unit (NTTTU) within the Labour Division of The Ministry of Commerce, Industry, Labour and Immigration (MCILI) offers trade training as well as national trade certification. The trade certification is based upon a National Trades Testing and Training Certificate (NTTTC) that is outcomes-based and multi-levelled. Stakeholders from the field research reported that approximately 12,000 have graduated from this NTTTC since 1981 and that certificate holders have a strong presence in the construction sector. The certification, in principle, defines a set of national skills standards for construction workers, however NTTTC assessments are derived from ILO defined skill sets, not by local industry.

To administer the NTTTC standards, the NTTTU oversees apprenticeships in the formal sector and trades testing in the informal sector.

In the formal sector apprenticeship scheme, apprenticeships have off-job training provided by an accredited education institution and are transitioning to be coordinated by the newly established entity: the Solomon Islands Tertiary Education and Skills Authority (SITESA, established 2019). In these arrangements, the education institution is tasked with assessing both off-job and on-job components. Apprentices within this system enter contracts with workplaces through are supported by national policy that defines their rights and the employment responsibilities of stakeholders to these contracts. The NTTTU also facilitates placement of apprentices into workplaces, manages partnerships with formal training institutions, and is responsible for regulation and monitoring of an apprentice's training.

The NTTTU has an Industry Standards Advisory Group (ISAG) designed to facilitate partnership between industries, training institutions, and the government Labour division, however, stakeholders in the research noted that this mechanism lacked policy guidance and was therefore ineffective.

Crucially though, it is unclear what division of an apprentices learning is delivered on-job and what is delivered off-job. It is also unclear whether outcomes-driven workplace training is delivered in these apprenticeships or whether these are more loosely structured workplace experiences.

Previously, the government owned Solomon Islands National University (SINU) was the only provider recognised to allow these apprenticeship arrangements as a part of their programmes. Now, other formal institutions can offer these schemes too, however, only if they meet certain standards. Due to regulatory system changes, the establishment of SITESA, training providers have been given interim recognition for apprenticeship programmes while they prepare for initial reviews. This research did not identify other education providers offering the apprenticeships. SITESA is still establishing its capacity, so it is uncertain when these provisional arrangements will change.

SINU is the largest formal construction skills provider in the Solomon Islands. It was established in 2013 through the combination of several tertiary education institutes. These were the Solomon Islands Teachers College, Public Administration Training School, Ranadi Marine Training School,

Honiara Nursing Training school, and Honiara Technical Institute. Further growth has seen SINU's scope of programmes increase and it now offers a wide range of technical and non-technical programmes. Construction courses at SINU include Carpentry, Joinery, Plumbing, and Electrical with a new Construction (Steel, concrete, civil works, etc) programme under development. These courses are the ones with apprenticeships integrated within them. It is not clear what timings area given to on-job and off-job elements in these programmes.

SINU also offer short courses in construction trades. These can be delivered provincially by partnering with RTCs or SINU centres to increase access to skills training too. Funding for these courses comes from employers or employees.

In informal settings, the NTTTU specifies skills standards for non-accredited providers, such as Rural Training Centres (RTCs) and Community-based training centers, to train to. They can then assess learners against these to provide the national NTTTC certification. There are some nuances in these arrangements and further work is needed to understand the relationships and responsibilities here. Further, the NTTTC testing may also be provided to workers who have not been through any formal training. This is a useful tool for skills recognition and the empowerment of the informal workforce. This occurs on request by the industry.

Industry also provides their own non-accredited training programmes. Large employers are taking on employees for development in their own internally designed programmes. In these, the employers handle the on-job skills formation and some, though not all offering these arrangements, send their employees for block courses to develop off-job skills. Stakeholders reported that, typically, employees in these arrangements will be sent to SINU or APTC.

We could not identify any evaluations of the effectiveness and capacity of these training methods in the Solomon Islands.

Formal construction skills training is supported in the Solomon Islands through many education and training providers beyond SINU. The most numerous are the Rural Training Centres (RTCs) with approximately 60-70 providers, mostly owned by churches. Community-based training centres also provide non-accredited construction skills development relevant to local communities. These are often in basic infrastructure maintenance, rural water supply and hygiene services, and specific equipment training to enable and empower more remote communities to maintain their infrastructure. Other notable training institutions within the Solomon Islands are Don Bosco and APTC.

Quality assurance of providers and programmes is managed by SITESA, though SITESA has wider strategic functions as well. NTTTU provides some regulation of apprentices and workplaces offering apprenticeships. Due to the recency of SITESA’s establishment, the training system is in a state of change and inconsistencies and incompatibilities currently exist between SITESA and MCILI roles.

Work is underway to have SINU alignment and accreditation with the Australian Qualifications Framework (AQF) though the Solomon Islands have a national qualifications framework, referenced against the Pacific Qualifications Framework (PQF) (USP and Pacific Islands Forum Secretariat, 2018).

It is common for employers to bring in international experts for skills training with their staff. Similarly, employers, in some instances, are sending their employees overseas for longer-term skills development.

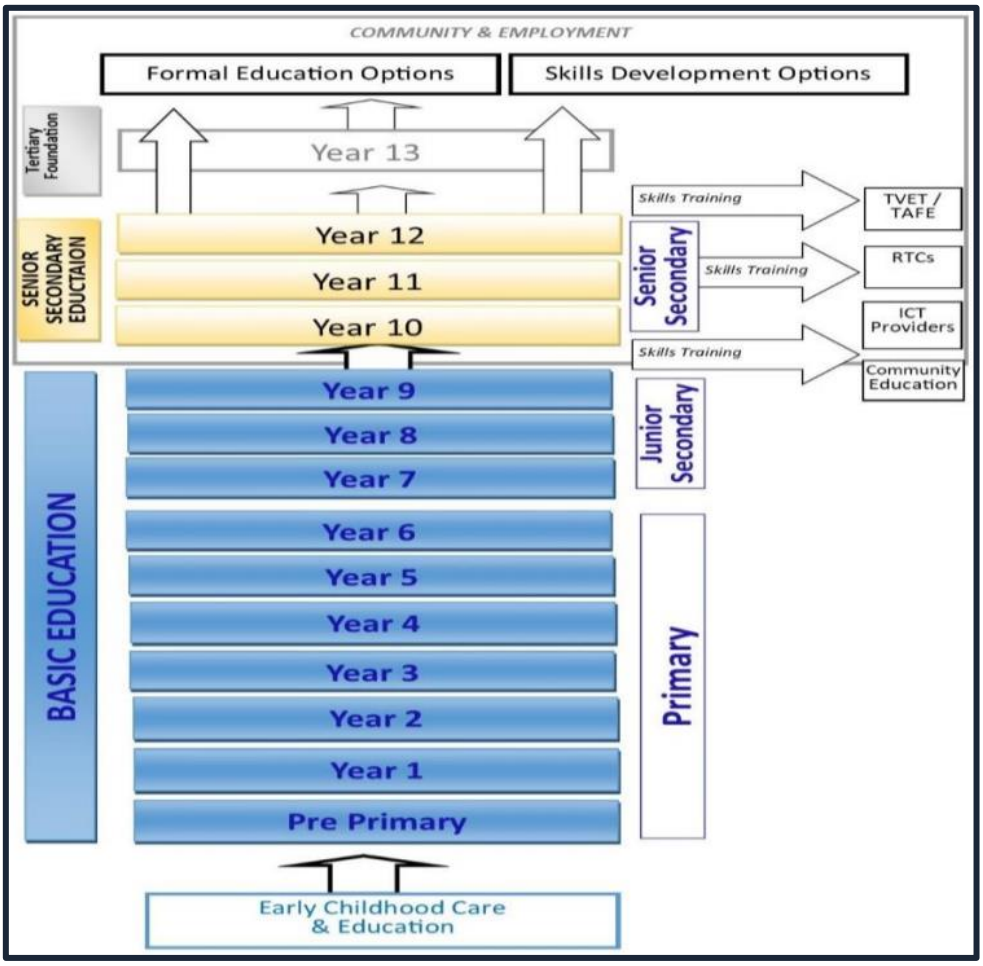


Figure 20: Solomon Islands Education Pathways.
Source: Solomon Islands Ministry of Education and Human Resource Development Annual Report, (Ministry of Education and Human Resource Development, 2019).

Tokelau Models

Tokelau does not have a formal industry training, or work-based learning, system in place. All learning in the workplace is informal and non-formal. Learners are commonly sent to New Zealand, Samoa, or Fiji for skills development.

Previously, schools in Tokelau had a TVET programme which catered to marginalised learners or those not engaging with the academic curriculum at secondary level. This was offered through distance learning modules of the USP through their extensions in each atoll. Tools and classrooms were set up but due to a lack of qualified trainers the programme came to an end. This programme has now been replaced with foundation literacy programmes through Te Kura School, New Zealand. Currently, there are no formal TVET providers in Tokelau.

There are no private construction companies in Tokelau. All local able men are employed under the respective council of elders (Taupulega) in the three villages in the men's group (Aumaga) and then some of these men are assigned for the construction projects based on their skills and experience. In Nukunonu, the Mayor makes the decision about who will be part of the construction group; in Fakaofo and Atafu, the president of the Aumaga works with the Mayor and leading men of the Aumaga to determine this. Recently, overseas construction contractors have been brought into Tokelau for significant infrastructure development activities. So, the system to deliver infrastructure

is highly flexible, however, there is little attention given to formal skills development due to a lack of scale. Aumaga members are assigned to varied work depending on project needs.

There is no coaching or mentorship and there are no formal assessment systems for workplace learning. Leading men from the Aumaga all currently have overseas qualifications, though this is not mandated. Those who do have overseas training in construction often will demonstrate required skills ad hoc to the Aumaga, however, most of the skills are transferred informally through family and community members.

The main objective of the Aumaga is to complete infrastructure outcomes; there are no standards to meet either for the outcomes of the infrastructure or the process that was used.

Recognition of Current Competency is not currently occurring in Tokelau. There is also no formal system to manage progression and skills development in the Aumaga so skills development is not being acknowledged equally.

Tonga Models

Tonga does not have any active industry training models; provider-based TVET is the dominant formal method of skills formation in Tonga. It was noted, however, that the Tonga Institute of Science and Technology (TIST) is engaged with dual training methods, combining workplace and institutional learning, for several its programmes including construction (Australian Council for Educational Research and Scope Global, 2014). The status of these arrangements is unclear, but they are dependent on informal relationships with employers rather than structured industry training principles. Stakeholders in this research reported engaging with TIST to try and establish workplace learning opportunities but to no success. Future work is needed to understand how TIST designs and delivers these workplace learning experiences and how they could be involved in a national industry training system.

Institution-based learning is the only method of formal construction skills training in Tonga, providing accredited and non-accredited programmes. The Tonga National Qualifications and Accreditation Board (TNQAB), responsible for implementing a Tongan NQF and managing providers and qualifications in the system, had 29 registered providers and a further 16 non-registered training providers in the TVET sector at 2014 (Australian Council for Educational Research and Scope Global, 2014). The largest by enrolment numbers in all TVET are the two government providers Tonga Institute of Higher Education (TIHE) and TIST as well as Tupou Tertiary Institute (TTI). The TVET providers are loosely grouped into four provider groups: government providers, Free Wesleyan Church providers, Catholic Church providers, and private providers. It should be noted that the government is reviewing submissions on a bill to establish a national university in Tonga (Asia Pacific Report, 2021). This institution would likely merge the government providers, including TIHE and TIST, into a single national body that provides both academic and vocational courses. The bill is currently being considered by parliament.

Some education and training providers run courses that accommodate those in employment such as part time and flexible delivery hours. Some include workplace attachments as a part of their TVET programmes, however, these are based upon time in the workplace rather than being outcome based. There are no providers in Tonga that offer programmes with integrated workplace learning outcomes. More research is needed to understand the prevalence of workplace attachments in Tonga and the Tongan construction sector.

Notably, with the lack of an industry-led skills formation system, there is no current agreed qualification for practicing professionals in the construction sector (Australian Council for Educational Research and Scope Global, 2014).

Some employers deliver non-formal and non-accredited formal learning activities to their employees. These could be from skilled staff members or skilled professionals brought in from overseas. Some will also send workers overseas for skills development opportunities.

System	Providers
Government system	Tonga Institute of Science and Technology (TIST) Tonga Institute of Higher Education (TIHE)
Free Wesleyan Church	Tupou Tertiary Institute (TTI) Pouono Trade Campus Tupou College Queen Salote College Hango Agricultural College
Catholic Church system	'Ahopanilolo Technical College St Joseph's Business College Montfort Technical Institute
Private providers	'Unuaki 'o Tonga Royal Institute
Regional providers	University of South Pacific

* Pouono Trade Campus, Tupou College and Queen Salote College provide training services under the auspice of TTI.

Figure 21: Largest Tonga TVET providers by type.
Source: Research into the Financing of Technical and Vocational Education and Training (TVET) in the Pacific: Tonga Country Report, (Australian Council for Educational Research and Scope Global, 2014)

Management of TVET in Tonga is provided by the Ministry of Education and Training with quality assurance functions sitting within TNQAB. The Tongan skills development system is beginning to develop national competency-based qualifications named 'National Qualifications' following the establishment of the Tonga Qualifications Framework (TQF) (Tonga National Qualifications and Accreditation Board, 2009). It has taken time to establish momentum, however, the TQF now has 10 national qualifications listed (Tonga National Qualifications and Accreditation Board, 2021). These are in the areas of hospitality and aged care. National qualifications are designed by Industry Training Advisory Committees (ISACs); industry-based temporary working groups with the mandate to design and develop national qualifications that are embraced by industry and meet its needs (Tonga National Qualifications and Accrediation Board, 2019). These national qualifications are made up of modular competency standards include best practice fields such as graduate profiles and learning pathways, and have descriptions for RPL and RCC processes. Importantly, an ITAC was stated to be in operation in 2012 in an Australian and NZ government *Tonga TVET support programme* evaluation but no national qualifications have been registered on the TNQAB as a result (Australian Governement DFAT, 2012). TNQAB has guidance materials available for the development of national qualifications and competency standards that are robust (Tonga National Qualifications and Accreditations Board, 2018); these include detailed guidance for functional mapping of the sectors, demonstrating demand for the qualification, and developing competency standards and national qualifications. It is unclear why more national qualifications are not listed on the TNQAB, particularly in the field of construction as this was stated to be in progress in 2012.

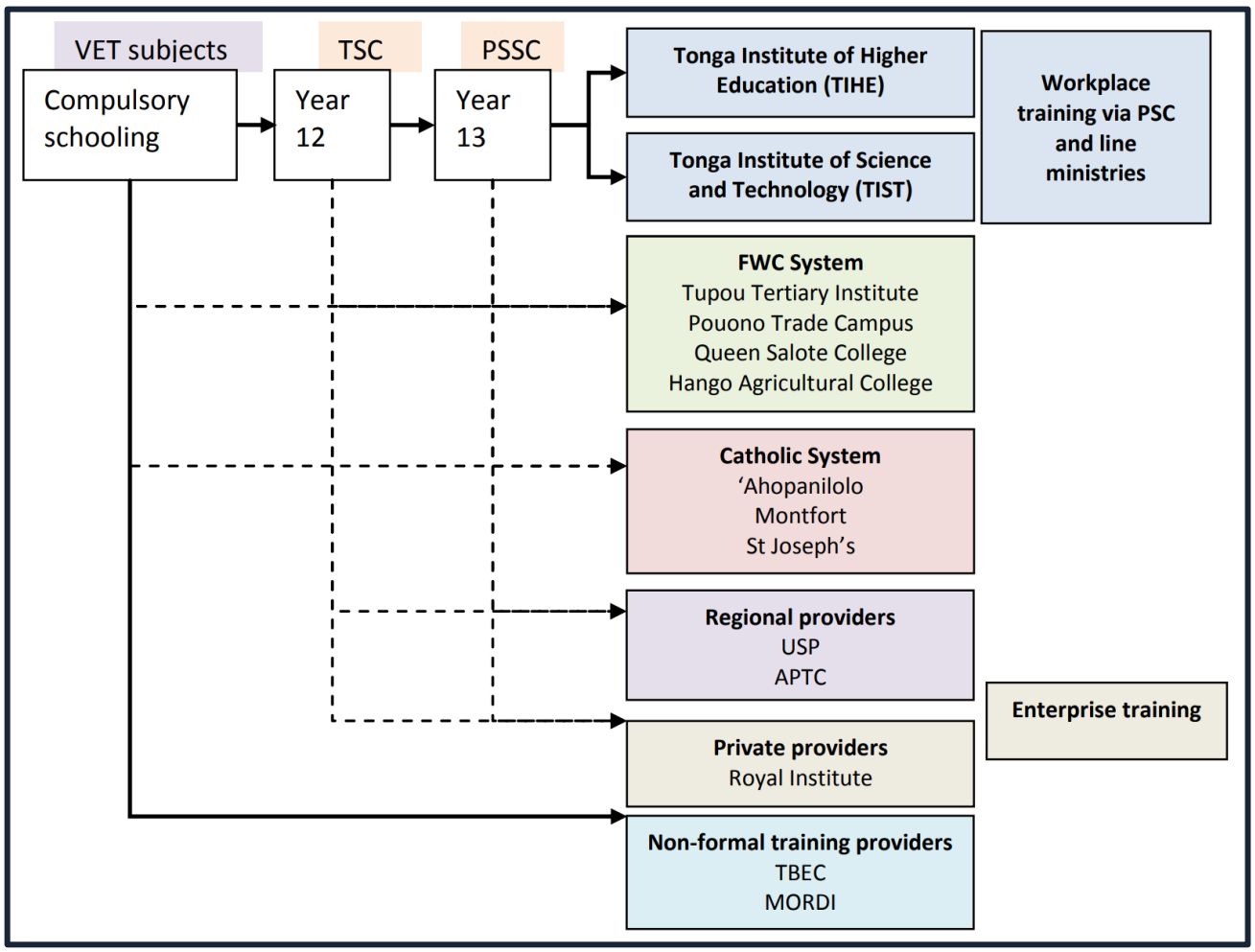


Figure 22: WBL Providers and pathways within the Tongan Education System.
Source: Research into the Financing of Technical and Vocational Education and Training (TVET) in the Pacific: Tonga Country Report, (Australian Council for Educational Research and Scope Global, 2014)

Appendix 10: Barriers to the implementation of industry training models - National findings by Country

The Pacific experiences many barriers relating to the quality provision of WBL and industry training; some due to the geographic and demographic factors described the earlier sections and some due to the structure and implementation of ancillary systems.

Barriers to effective TVET provision in the pacific, identified by UNESCO and SPC (Pacific Community and UNESCO, 2015), are:

- An imbalance in demand for and supply of skills;
- Unclear coordination of TVET;
- Lack of demand-driven data – training needs analysis/market/graduate tracer surveys;
- Quality assurance and standards – at a very early stage of development;
- Poor/inadequate management pool of TVET personnel;
- Financing – TVET is underfunded;
- Limited pathways and models of excellence; and
- Limited organisation and modes of delivery.

While these provide valuable context, these barriers are framed around successful institutional and off-job WBL in the Pacific. Off-job learning is an important component of industry training, but it is not its core focus. Importantly, the overarching barriers to quality assurance, coordination, finance, and skills supply and demand listed above are directly relevant to industry training models which are typically managed under the same systems as TVET. So, these barriers are relevant to industry training but a deeper understanding of the barriers to industry training models as a whole and within our focus countries is needed.

These barriers are a useful to frame of reference to understand before the following sections. In the sections below, key barriers to successful industry training in our focus countries are outlined and key themes that emerged from these are presented.

Cook Islands Barriers

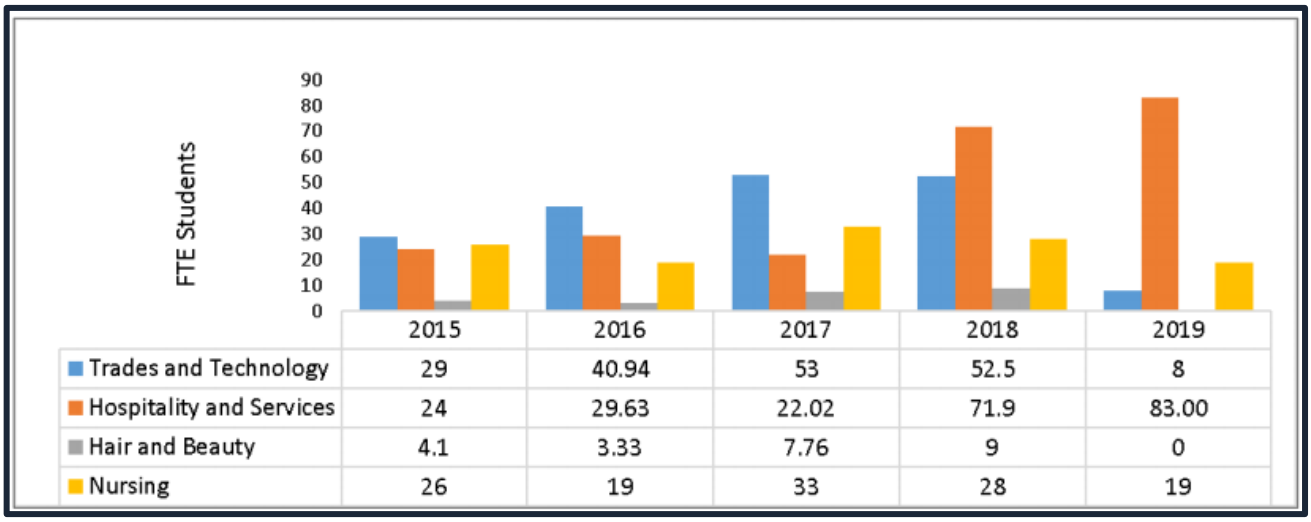
Three key barriers exist to formal industry training being implemented in the Cook Islands: a lack of resources; lack of coordination and engagement; and a lack of relevant programmes.

Participants in our research identified that government does not have the resources necessary to lead and coordinate the sector. Resources are not only financial in this instance. Coordinating and managing an effective industry training system requires dedicated and sustained finance from stakeholders. These costs are typically shared in successful industry training system however, particularly in inception, costs will be high.

Employers do not have the resources to send employees away for formal training. The costs for formal construction training activities are prohibitive and are too much for employers to currently afford. Employers also identified opportunity costs of training to be significant. Learners are equally unable to afford these formal courses.

Institutional providers do not have sufficient resources to provide effective training. WBL programmes typically have a high resource cost attached to them when practical training is provided through institutions. Currently, this is the case with institutional provision in the Cook Islands. Industry training modes are often more materials-efficient than provider driven modes as there is less redundancy in materials use: learners practice as they implement so there can be less wastage. Partnership opportunities emerged from the research when identifying more-well equipped employers who were not able to send employees away for training and under-resourced providers who needed materials and equipment to train with.

Student fees are likely to have increased this year with a boost in enrolment numbers described by participants because of the government fees free education scheme. This was one part of the Cook Islands COVID-19 economic response plan and comes following a steep drop in learner numbers in 2019 in all tertiary areas besides hospitality as seen in Figure 23. This will offset the resource constraints partially, but the high cost of provision remains.



	2015	2016	2017	2018	2019
Trades and Technology	29	40.94	53	52.5	8
Hospitality and Services	24	29.63	22.02	71.9	83.00
Hair and Beauty	4.1	3.33	7.76	9	0
Nursing	26	19	33	28	19

Figure 23: Cook Islands National Tertiary Enrolments - FTE Students. Years 2015-2019.
Source: 2020 Education Statistics Report, Government of the Cook Islands.

Beyond resource, capability has also been identified as a barrier to successful industry training in the Cook Islands. Participants reported that a shortage of skilled trainers and tutors exists within the Cook Islands. Education and training providers are finding it difficult to find new or replacement trainers and tutors for their vocational courses. Additionally, trainer and tutor rates are expensive, exaggerating the resource shortage issue. Current government immigration policies were also mentioned in the research as barriers to recruiting skilled trainers from overseas.

Participants also described that government representatives lacked the sector specific knowledge and competence to lead the construction sector. Typically, university graduates with no practical knowledge of industry are tasked with engaging and leading the sector. This lack of expertise leading and championing the sector contributes to a lack of coordination and engagement with work-based learning and industry stakeholders within the Cook Islands.

Participants described not being listened to by government representatives and needing more engagement from government regarding workforce planning and from providers in the design of formal programmes. There is currently an absence of trust in the training system as it is not generating effective outcomes and industry are not being sufficiently involved in skills development. Training providers have communication lines with industry, but industry is not finding this suitable and wants to engage more meaningfully in design and delivery.

The coordination of pathways was also seen to be ineffective. Support was found for increased advocacy of construction pathways in secondary schools.

Programmes through providers were also seen to have low relevance to industry activities, in some instances. This was the case domestically with programmes being delivered to an inconsistent manner but notably internationally. The Cook Islands sends a significant number of learners overseas to study and gain experience, often in New Zealand. Participants emphasised that when this occurs it is usually effective, however aspects of international programmes were irrelevant to the Cook Islands context. Ensuring the relevance of international skills development for the Cook Islands will be important, not only to the industry relevance of immediate learners, but to future trainers too.

Year	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Government Appropriation to Ministry of Education	$18,432,237	18,857,622	19,588,429	20,130,303	19,895,611
Nominal GDP	$418,364,000	427,310,000	447,269,000	458,222,000	496,800,000
%	4.4	4.4	4.4	4.4	4.0

Figure 24: Cook Islands Government Education Budget as a Percentage of Nominal GDP. Source: 2020 Education Statistics Report, Government of the Cook Islands.

Kiribati Barriers

The main barriers to establishing successful industry training in Kiribati are the sustainability of provision, lack of capacity, and lack of engagement with industry.

Kiribati has an effective TVET provider, KIT. The provider is funded partially by government but is also maintained through strong donor support. Though its institutional provision produces quality outcomes, this dependency presents a risk to the sustainability of the system. Funding from the government was noted to be inefficient, with ceilings in place that limited procurement processes.

Sustainability of provision is influenced by the lack of capacity of employers. Opportunities for specialised skill placements in Kiribati, as well as standard trade skills, are limited. Kiribati's size means that it does not have the capacity for many private construction activities. The population is growing, and job opportunities are low.

More than this, the key barrier to formal industry training establishment is that industry does not have sufficient resources and skills to fully support attached learners. This includes often not having correct or safe equipment to train with or skilled trainers available to train learners. This is also complicated by cultural barriers to knowledge sharing. Traditionally in Kiribati, a conservative approach to knowledge sharing exists. Knowledge and skills are not widely shared as they are viewed as the property of the individual's family, only to be shared and transferred fully to a rightful heir of their family. Their resources and access to trainers will need to be addressed if employment-based or workplace-centred industry activities are to be successfully established.

Participants also stated in the research that KIT does not have the capacity to deal with growing enrolment numbers. Limited training materials are available within the institutions.

Industry and providers are not well linked. KIT links its students to workplace learning opportunities, but these are not outcome driven. In addition, participants in the research reported KIT not sending

any information through about training needs or learner support information. This has led to examples of employers giving unrelated experiences to learners or simply treating them as cheap labour. Employers are given checklists to evaluate the learners quality of work for monitoring purposes but the placements are not organised to deliver occupational competences or sign off learner skills.

Regarding the design of programmes, KIT has a course advisory committee, but employers in the research noted that their perspectives had not been incorporated into the programmes. Industry have indicated that some KIT programmes do not meet their needs, either in relevance or level.

Local and traditional knowledge and skills will need to be considered when designing and establishing industry training in Kiribati. Not only the limited knowledge sharing, but the potential for these skills to add to the construction programmes and make these more locally relevant.

Other barriers included variable construction standards, low online and distance learning capabilities of staff, and the inability for KIT to secure accreditation and permission for higher level courses.

Niue Barriers

The key barriers to establishing a successful industry training system in Niue are lack of resources, lack of capacity, and labour mobility.

Niue does not have sufficient resources to fully establish their own industry training system. The government has not established overarching institutional supports for industry training and is dependent on international funding. Though participants in this research were strong advocates of the learning mode, it was recognised that the resources to establish the system are not available.

Institutional and human resource capacity is also lacking in Niue which means it cannot fulfil the range of industry training functions. For example, there is no qualifications authority in Niue. General education in Niue follows a contextualised New Zealand curriculum, partially for these reasons. Participants also described a lack of skilled trainers available within industry; recognising that many technically skilled individuals may exist in the workforce, however, they often have no formal qualification against which their skills might be recognised. The general lack of skilled individuals is compounded by the reduced number with recognised skills. The establishment of industry training models in Niue would need to recognise the capacity for core functions such as regulation, quality assurance, and accreditation to be completed in Niue.

Opportunities for training in Niue may also be variable. Construction activities in Niue are dependent to a large degree on the limited availability of construction projects and contracts. This means that learning opportunities in Niue may be fragmented: being delivered inconsistently over time and presenting varying opportunities for skills formation. This is always likely to limit the scope of construction-based industry training.

Also, Niue's close relationship and travel arrangements with New Zealand, along with significant expected wage differentials, form a strong migration pathway from Niue to New Zealand. Having a sustainable industry training pathway in Niue requires skilled workers to remain in Niue to train learners. However, there was evidence of international contractors wishing to contribute to skills development in Niue while working there. Also, our participants described a trend of older, experienced workers wishing to return to Niue, these may prove to be a source of workplace learning expertise. Alternative methods or incentives to contribute to an industry training system in Niue may need to be considered.

Solomon Islands Barriers

Key barriers to the development of successful industry training in the Solomon Islands are a lack of regulation and standards, quality assurance, coordination, and capacity.

"*Good regulation and better experience, would change the whole [construction] industry*."
- Solomon Islands Employer

Inconsistent standards through the skills development system will need to be addressed to establish a successful industry system. Currently, the building code in the Solomon Islands is ineffective and out of date. Participants in the research identified that builders know basic principles but do not understand the standards which apply to construction. This leads to an inconsistent quality of outcomes and a poor understanding of the competences required to participate in the industry. Providers of construction related education and training are currently providing inconsistent training outcomes - participants described inconsistencies between providers, particularly RTCs with no standardised curriculum to train to.

Without proper professional standards, the public esteem of the construction industry is reduced as well as the quality of outcomes. New building regulations are being introduced to parliament, however, participants noted that this has been in the works for some time and the outcome of the submission is uncertain. A working group of the Solomon Islands Chamber of Commerce and Industries (SICCI) has been recently tasked with reviewing and standardising building codes.

Having construction standards is not enough, however, they need to be effectively regulated and monitored. Current quality assurance in the construction industry and its training sector is seen as ineffective. Competence-based assessment needs improvement and practical training needs to be better monitored to ensure quality outcomes. Central to this issue are apprenticeships. The Labour department currently only has the capacity to provide assessments and check that providers of apprenticeships meet minimum standards. Workforce monitoring for practical learning is weak and ongoing monitoring of apprenticeship activities is missing. Participants noted particular challenges with monitoring the performance of unskilled workers in civil works companies. Because of these lower quality apprenticeships, resulting trade skills certificates are often seen as low value and not delivering industry competence.

SITESA has been recently established and is finding its feet; however, the organisation is tasked with addressing many of the barriers above. Crucial to effectively addressing these challenges will be establishing clear roles and responsibilities within the sector. Participants in the research noted a lack of sector coordination and general confusion about roles and responsibilities. Notably, these included the differences and overlapping responsibilities between SITESA and the Labour department which will need to be addressed, in particular, the management of apprenticeships. An example of this comes from the recent uplifting of several RTCs. Standards were lifted and the providers achieved recognition from SITESA, however they did not teach to the NTTTC curriculum, therefore, the Labour department could not assess and accredit their learners.

It is unclear from the research whether the NTTTC curriculum meets industry needs. Participants stated that NTTTC graduates had a strong presence in the industry but also that industry had designed their own informal apprenticeship scheme in place of MCILI apprenticeships. It is unclear whether NTTTC certification is sought following these non-formal industry apprenticeships. Further investigation into NTTTC relevance to industry is needed, however, overall, participants noted that the apprenticeship policy is out of date and the system is not meeting training needs.

Additional coordination challenges stem from inconsistent donor activities. Strong donor support exists in the training sector; however, it is often piecemeal and lacks strategic vision. Moreover, there is a lack of project or programme evaluation to support activities. Programmes are launched and standards are lifted, then once funding recedes, they disband. Taking a whole of sector approach to support strategies would be valuable and may increase retention of outcomes.

Coordination of representative stakeholder groups was also identified as a challenge. Industry bodies and other stakeholder groups exist in the Solomon Islands construction sector; however, they are ineffective and lack guidance. Participants in the research stated that the government operated Industry Standards Advisory Group (ISAG), although having good participation from stakeholders, lacks policy guidance and is therefore not effective. The group needs direction and structure to enable actionable consensus to be reached and have the processes to incorporate these. Further, professional bodies such as the Solomon Islands Built Environment Professional Association are not fulfilling or contributing to workforce planning functions and the construction regulatory body and SICCI need to be strengthened. Establishing quality criteria for membership and increasing the reach of memberships for these organisations was seen as a solution to a lack of trust in employer quality; these memberships would provide an industry certification of good practice.

The lack of standards and coordination in the construction sector create a situation where skilled workers are hard to identify and procure. Connecting skilled workers to work opportunities is a challenge as there is no meaningful accreditation for construction workers to achieve; the NTTTC does not address current industry competence needs. Smaller, residential construction opportunities are largely acquired by word-of-mouth due to a lack of visibility of the workforce. A disconnect between informal workers and the formal economy exists. Participants in the research noted that creating a centralised database of the workforce and their accreditations would help link employers with opportunities, particularly in the informal or remote areas.

With SITESA being a new institution, it may take time for it to develop the capacity and capabilities it requires to effectively meet its mandate. Beyond SITESA, there is a lack of capacity within the sector. Currently, a limited number of industry placements exist; some employers are unable to release employees for formal training due to opportunity and training costs; and providers lack the resources and training facilities for practical off-job learning. Learner supply is high for some RTCs and in some cases the ability to meet the supply is low. Central to establishing an industry training system would be the need to secure sustainable workplace learning opportunities.

Participants also noted a lack of community development and capability in the remote areas due to urban drift. Skilled workers are tending to move toward urban centres with more employment opportunities. Some are also moving overseas in a wider search for opportunities. Properly incentivising skilled workers to remain in the Solomon Islands and in their more remote communities within the Solomon Islands will be needed.

Other challenges include employer hesitancy to train and competition are reducing placement opportunities; geographic distribution of communities with more remote areas having lower opportunities for training; cost of internet for online provision of learning; low wages are limiting participation and work ethic; and overseas workers are frequently being brought in to perform work in the Solomon Islands, taking opportunities away from the local workforce. It is unclear whether these opportunities are being effectively advertised or offered to local workers, however, the lack of coordination and monitoring of graduates and the workforce as a whole suggests that they are not.

Tokelau Barriers

Key barriers to establishing industry training in Tokelau are limited capacity, resources, quality standards, and coordination of working groups.

Limited Capacity and Resources

Of critical importance to establishing effective industry training in Tokelau is establishing the scale necessary to support effective training systems, crucially, in workplace learning opportunities. As identified above, there are no private construction companies. Private construction is informally organised through the Aumaga, and the more complex construction projects are carried out by contractors who bring in their own labour.

Sustaining industry training in Tokelau, therefore, will require the close participation of Aumaga as the central construction workplace provider of skills and competence. There is also potential to attain workplace competence through international contractor operations in Tokelau.

More than workplace learning opportunities, Tokelau does not have a formal training system. Formal education in Tokelau is limited to the three schools providing comprehensive general education to secondary level. There is no formal or structured regulation, recognition, or assessment of competence occurring in the industry and there are no providers to offer supplementary competences. Without formal structures in place to support the establishment of industry training systems, implementation and assigning capacity to perform these new functions will be a challenge. It will also require sufficient levels of funding.

Further, there is a lack of the accredited trainer/assessors in the Aumaga required to support the development and accreditation of off-job competence. Leading men within the group will perform ad hoc non-formal learning activities where needed to enable the group to perform activities, however, it is often seen as easier for the skilled individuals to simply perform the task to get the job completed. There are also cultural barriers to delivering skills training. Elders within the Aumaga are given leading roles and are expected to deliver training. Sometimes meaning that younger, but more skilled, workers are unable to fill training roles or are unwilling to be in a position of training their elders.

Limited Presence and Application of Quality Standards

It is the responsibility of the Taupulega to ensure quality construction outcomes, however, there are no formal construction standards or building codes in Tokelau to base these on. This had led to varied construction outcomes which has cross-sectoral impacts on health, wellbeing, and disaster resilience. Beyond outcomes, there are also no standards for construction practices, including health and safety policies, which can result in unsafe working conditions.

The quality of outcomes is also dependent on the availability of resources. As travel and shipping to Tokelau are infrequent, procurement of materials can be a challenge. It is difficult to bring supplies into Tokelau and to distribute them to construction sites and between atolls. Materials for construction are limited to what is available at the local bulk store, there is one per atoll, and this often delays and/or materially changes construction plans. Further, workers who have trained overseas and return to Tokelau often do not have experiences working with the materials that Tokelau has available so further skills development is needed locally with these.

Limited Coordination of Construction Activities and Skills Development

Coordination of construction activities is a challenge. Most construction activities have no architectural plans, and the leading man will describe what the structure will look like to the Aumaga, rather than providing plans. When plans do exist there are often many workers without the training required to read and interpret them. Different trades activities are also not coordinated through the

course of a construction project, leading to rework such as needing to destroy and remake walls in order to install electrical wiring.

Crucially, workforce competences are not effectively mapped and managed. Participants in the research stated that skilled workers returning from overseas often were not assigned to their areas of specialism. While some people assigned to construction programmes will have limited or no skills in the skills required to carry out the assignment effectively. Workers were also assigned to multiple construction projects without knowledge of the different construction standards for each structure. International contractors who have been brought in to do work in Tokelau were sometimes found not to have the requisite competences to perform the work they were responsible for. There is a need for workforce management to be improved so that competent workers are assigned to the right areas and can develop less-skilled workers in the process.

Tonga Barriers

The key barriers to establishing a successful industry training sector in Tonga are a lack of regulation and standards, resources, capacity, and coordination.

Insufficient resources for training are a challenge. Industry does not have sufficient resources to support workplace learning. For providers, lack of space, facilities, modern tools, trainers, and finance were identified as challenges. TVET training is having some success, however, it was felt in providers as well as industry that without sufficient funding, they would not be able to function well in this system. This was reinforced in a 2014 DFAT study into Tongan TVET finding insufficient funding was available to sustain the TVET system (Australian Council for Educational Research and Scope Global, 2014). The annual government grant for providers is essential to their functioning. It was noted that there are also differences in financial resilience between providers. Church schools consistently have poorer financial positions than non-church providers. Funding was identified as a critical barrier to industry training implementation.

In Tonga, a building code exists, but enforcement is a challenge. Participants in the research identified that better enforcement of this building code may be a way to lift competency standards in the sector and might positively influence workers attitudes. Policies for the operationalising of building standards would support this.

Another barrier is employer participation with industry training. Attitudes from employers in the research were mixed surrounding their role in an industry training system. Some put forward the view that it was their duty to train in their sector and that they experienced many benefits from this. Others, albeit a minority, put forward the view that they required competent workers from the very first day and that training them was not their role. These attitudes may intersect with other attitudes from stakeholders describing that many employers in the sector are profit-driven and do not have extra capacity to either train in the workplace or release their employees for training during work hours. These attitudes will need to be managed in any industry training implementation however they are net positive toward the mode. Further work will need to be done to understand the net impacts this will have on workplace learning opportunities.

Informal and non-formal training currently within employers was identified to be of variable quality. Proper standards and evaluations would help to lift these and make them more consistent in an industry training system, however the skills of trainers in employers needs to be assessed.

TIST capacity is also an issue. Stakeholders describe that TIST is offering good formal training overall, however, has a highly limited number of students that it may enrol, although it was highlighted that TVET providers should work with industry to improve the skills of their trainers and

relevance of their programmes as a gap between training provider provision and industry need was identified.

Opportunities for skills development were also identified as varied. Participants in the research identified that some employers may take on workers for relatively short durations over the course of project activities, but do not have the ability to sustain the workers over longer periods. This means that workplace learning activities may be fragmented or split between multiple employers. To fully recognise the skills formation, a highly coordinated system that tracks learners may be needed, however, participants in the research identified that there is a lack of coordination in construction sector skills development overall.

This lack of coordination was defined principally by a lack of government initiation, support, or incentives for workplace learning. Their focus is on formal training. There are also no bodies such as contractors' associations to champion this either, therefore, workplace learning activities have little presence in the skills development system. Participants also noted government processes and bureaucracy to be barriers to implementation.

There is a notable lack of skills supply and demand statistics too. This lack of information means that the skills development system is missing a key piece of evidence for the design development, and sustainability of programmes.

Workers leaving Tonga for work opportunities was identified as a challenge. As is a common experience through many Pacific Island Countries, skilled workers are leaving to seek higher wages or further opportunities unavailable locally. This reduces the worker pool and those who may be able to train new generations of learners. Participants identified that the procurement system for construction contracts could be overhauled to increase worker access to local opportunities to mediate this. This would make it easier to connect the workforce to employment.

Other barriers included a lack of pathways for learners in the sector, both within and between countries; access of remote learners was low; and there was a lack of specialised training provision in Tonga. Learners need some elements of specialised trade skills to be developed off-job and there are few relevant opportunities and trainers who can do this.

Summary of Key Barriers to Formal Industry Training for each Focus Country

Table 33: Key Barriers to Formal Industry Training from the research by Country.

	KEY CHALLENGES		
COUNTRY	**Lack of Resources and Capacity**	**Lack of Coordination & Engagement**	**Lack of Regulation and Quality Standards**
COOK ISLANDS	• Lack of resources to coordinate the sector. • Employers do not have the capacity to	• Government representatives need capability development to lead the sector.	• Not identified in this research.

	KEY CHALLENGES		
COUNTRY	**Lack of Resources and Capacity**	**Lack of Coordination & Engagement**	**Lack of Regulation and Quality Standards**
	send employees away for training. • Education providers do not have sufficient resources to provide effective training. • Shortage of skilled trainers and tutors.	• Lack of effective industry engagement mechanisms.	
KIRIBATI	• Dependency on international funding for sustainability of programmes. • Limited capacity of industry to accept learners. • Limited training materials and capacity for learners within education institutions.	• Lack of effective links between industry and institutional providers. • Ineffective industry engagement for programmes.	• Variable construction standards in industry.
NIUE	• Insufficient resources to establish a local industry training system. • Lack of skilled tutors and trainers. • Opportunities for workplace learning somewhat sporadic. • Migration pathways reduce availability of skilled workforce.	• Lack of overarching education support systems, such as a qualifications agency.	•

	KEY CHALLENGES		
COUNTRY	**Lack of Resources and Capacity**	**Lack of Coordination & Engagement**	**Lack of Regulation and Quality Standards**
SOLOMON ISLANDS	• Limited number of both industry and institutional placements.	• Unclear roles and responsibilities within the system. • Inconsistent donor activities within the system. • Industry and representative bodies not well coordinated and lacking guidance. • Difficulties connecting skills supply to demand.	• Inconsistent standards of construction. • Poor regulation and ineffective building code. • Inconsistent quality of institutional provision.
TOKELAU	• Limited resources to allocate to the establishment and implementation of formal industry training. • No current institutions beyond secondary school and USP. • Limited availability of skilled tutors and trainers. • Limited construction activity, mostly public. • Challenges in procuring and transporting quality construction materials.	• Coordination of construction activities is ineffective. Workers are assigned to areas with no experience or against their specialism. Also, overall project management is ineffective.	• No formal construction standards leading to varied infrastructure quality. Lack of quality materials also contributes to this.
TONGA	• Industry and institutions have	• Lack of government coordination of	• Enforcement of the building code is a

	KEY CHALLENGES		
COUNTRY	Lack of Resources and Capacity	Lack of Coordination & Engagement	Lack of Regulation and Quality Standards
	few resources and little capacity to train. • Mixed attitudes from employers for industry training models suggests, initially, fewer workplace opportunities for learners.	work-based learning. • No industry groups exist to lead or support industry training movements.	challenge and construction outcomes are variable.

Appendix 11: Stakeholder Perspectives on Inclusive Industry Training from the Field Research

Table 34: Countries' attitudes toward inclusive industry training from the field research.

COUNTRY	STAKEHOLDER PERSPECTIVES ON INCLUSIVE INDUSTRY TRAINING
Cook Islands	• Employers reported general openness to inclusivity in their organisations. Themes discussed were surrounding value-adding rather than proactive recruitment principles; if an individual can add value, they will be considered. Those with seen as having less 'value' are considered less. A common occurrence in the private sector, although this might represent a challenge to overcome for inclusion of individuals with more extreme disabilities or circumstances. • Greater learning pathways and advocacy for construction sector careers, particularly from secondary schools, were wanted by stakeholders. Better inclusion of students before they become NEET. • Inclusion of the Pa Enua (outer islands) was a priority. Stakeholders strongly advocated for the inclusion of Pa Enua perspectives in all aspects of the training system design and delivery as well as increasing opportunities for these more remote learners. Training requirements of the Northern and Southern groups were likely to be different. • Financial barriers were identified that excluded lower-income learners. These were for employers to release employees for formal training and for learners to access formal courses independent of employment.

Kiribati	• The dominant construction provider, and vocational education provider, in Kiribati, KIT has a focus on the inclusiveness of all programmes. To understand inclusiveness in Kiribati, KIT is key.
	  ○ KIT has a gender, access, and equality policy and admission policy concerning these issues.
	  ○ KIT prepares short courses based upon community needs to upskill disadvantaged and marginalised groups. These are arranged through the Ministry of Women, Youth, and Social Affairs in collaboration with stakeholders such as local women's associations, for example Itoin Ngaina, and the Association of Disabilities in Kiribati, Te Toamatoa
	  ○ Most learners enrolled at KIT are those who have fallen out with the general secondary education system. KIT and Child Fund work collaboratively to provide bridging programmes to enable all learners to access KIT programmes.
	  ○ Screening tests for KIT may be prohibitive: the test is in a range of skills and knowledge not necessarily needed within a single specialism, for example, the screening test contains automotive content, which is not needed in the construction industry. This

COUNTRY	STAKEHOLDER PERSPECTIVES ON INCLUSIVE INDUSTRY TRAINING
	knowledge is, generally, more prevalent in men who are entering the course; therefore, women are placed at a disadvantage for course access. ○ Buildings at KIT are designed for special needs and disabilities including wheelchair ramps and special bathroom facilities. ○ KIT supportive of the idea of gender advocacy in construction. Suggested their female tutors could be a good central point of this ○ Lack of tutors at KIT who can interpret for disabilities and tutors who are trained in disability education was reported as a barrier to inclusion of these groups. There is an increasing number of students with special needs enrolling at KIT and hired interpreters are facilitating their education, however, they have no technical understanding of the course material. This presents challenges in communicating the content to learners. ○ An increasing number of marginalised learners are enrolling at KIT. • Kiribati disability association, Te Toamatoa, advises and advocates for the voices of the disabled community including within the Course Advisory Committee for KIT. • The Kiribati Facility, an Australian government initiative supporting KIT, is focused on initiatives that demonstrate inclusive education values across youth engagement, gender, disability, climate change, and outer island management. They are seeing many successes. • Remoteness of learners remains a challenge for those geographically distributed. Only one other island apart from Tarawa has had KIT courses delivered, but not construction courses yet. • Certain disabilities are largely excluded from the construction sector due to the physical nature of the work., Generally, employers are open to hiring individuals with disabilities, particularly government employers which are a key source of employment in Kiribati. • Female graduates from KIT find employment in the construction sector, however, notably less after they are married or pregnant. • Stakeholders reported opportunities for women and individuals with disabilities in the construction sector, though these were few due to a lack of understanding of how to cater for their needs. • For traditional construction activities, work is allocated by gender roles. For example, women weave thatches for rooves and strings for knotting whereas men erect the structure.
Niue	• Stakeholders reported no learners were disadvantaged by distance due to the islands small size. • Learning through overseas skills development pathways is common for Niue. Learners are supported through these pathways by government if certain criteria are met. There is a need to understand more about these processes as the research did not uncover more information.

COUNTRY	STAKEHOLDER PERSPECTIVES ON INCLUSIVE INDUSTRY TRAINING
	• USP campus in Niue offers flexible learning programmes and has policies surrounding inclusion and diversity. Though, this institution does not currently offer construction programmes aside from engineering at a bachelors level. USP has strong student voice that is represented formally in the institution. • Secondary school multi-skills certificate has predominantly male participation at present. • Stakeholders generally reported that there were no issues with inclusion in the construction sector in Niue.
Solomon Islands	• Stakeholders reported that little is happening to make skills training more inclusive of vulnerable or marginalised groups. Very little is happening to advocate for greater participation from these groups too. • Stakeholders reported that the needs of the disabled community are poorly met in the Solomon Islands. For example, few buildings and pathways have ramps. • There is little in the building code about disability issues, although it is mentioned in policy. • There are some instances where the perspectives of marginalised people have been sought in construction, the WASH sector for example. • Employers reported no policies for recruitment of marginalised or disadvantaged learners; all recruitment comes from word of mouth. • Larger employers tend to involve women and, to a small degree, individuals with disabilities such as hearing impairment. • There is a slow trend of women entering the construction sector, though the labour force is still largely male. One stakeholder estimated that women comprise only about 0.5% of national graduates in industrial skills. • It was noted that some women participating in the construction sector experience gender violence due to their participation. ○ Illustratively, one large employer reported that from performing a companywide gender education session, some staff were surprised that spousal violence was not okay and thought it was allowed through custom. • National Council of Women and the Solomon Islands People with Disabilities groups might have more information about this topic. The research was unable to reach these groups but advises their inclusion to further understand the issues facing these communities. • Stakeholders reported that the current president of the Solomon Islands People with Disabilities group was effective and generally has been assisting members to gain skills and experience and participate in forums and advocacy for their group. • Traditional views in the Solomon Islands are that an individual must be a 'whole' person to work in the construction trades, meaning that they do not experience any mental or physical disabilities. Stakeholders reported that

COUNTRY	STAKEHOLDER PERSPECTIVES ON INCLUSIVE INDUSTRY TRAINING
	work needs to be done to change these perceptions and open discourse within the sector. • Stakeholders reported that, because regulation and quality assurance in the Solomon Islands was poor, any policy directives or system-participation criteria would not entirely solve the issues. They would need enforcement and monitoring of these. • Government stakeholders reported that gender equality, disability, and social inclusion (GEDSI) progress is being made nationally; it is included in planning and there is increasing pressure from donors. • GEDSI is included in community-based training initiatives, some of which have previously been run in construction, and in government recruitment processes. • Some rural training centres are focused on women and construction training. For instance, Divit RTC in Guadalcanal is a women's RTC that offers construction training. • Some rural training centres are offering course, including construction courses to individuals with disabilities. • It was noted that, whilst approximately 75% of the population fits under the 'youth' category, the national budget for youth in 2019 was only SBD 1 million. • SPC initiative, Youth@Work, had some successes, however, it has been marginalised since incorporation into the Ministry of Women and Youth.
Tokelau	• Majority of the learners who cannot make it to the end of secondary education or leave education early join the local public workforce and are assigned to areas such as the construction programmes. • Culturally, women in Tokelau are seen as sacred and it is the role of men to protect them. This also means that they are not expected to do any physically demanding chores, including construction. The question of female involvement in construction is significant to Tokelauan culture, however, all stakeholders, which represent a significant proportion of the Tokelauan stakeholders, strongly supported the involvement of women in construction. • Youth groups who participated in the research were particularly interested in the proposal of women in construction and were motivated to pursue this initiative.
Tonga	• Stakeholders reported mixed perspectives about access to training. Some stakeholders reported that there were few access issues due to a small population and land size, however, a greater number of stakeholders reported that access for both disadvantaged and marginalised learners was poor. Notably, concerns were raised regarding the access of learners in the outlying islands and the capacity of training institutions to meet learner demand. • Anti-discrimination policy exists in Tonga. • Generally, stakeholders were supportive of inclusive principles.

COUNTRY	STAKEHOLDER PERSPECTIVES ON INCLUSIVE INDUSTRY TRAINING
	• Some employers reported wanting support for the empowerment of marginalised groups to pursue informal skills development in the construction trades. Financial support was identified as a key factor for this to be achieved. • Women are finding employment in the construction sector following graduation from formal trainings. • Some rural training centres have open entry criteria to promote access. • Tonga skills has been providing short term training opportunities to people with disabilities, including construction training. Also, the group generally advocates for the interests of disadvantaged and marginalised learners.

Appendix 12: Analysis of Industry Training Success Factors to create a Working Model of Success for Industry Training in the Pacific

Global Industry Training Success Factors

Successful industry training is measured in different ways throughout the world. Differences in the ways success is measured arise from competing national priorities and the social, economic, and cultural environments within which industry training systems are established.

There are, however, common principles which underpin effective training systems everywhere. This is because the intended outcomes of industry training systems remain constant: these systems intend to produce effective graduates who have the skills that labour markets need. Different priorities and environments may shift the model of success around this idea, yet the central outcome of industry competence remains. For example, to gain industry competence, we must first define what it is. The only group that understands what skills, what performance, and what contexts a prospective employee needs to demonstrate and operate within, is industry. Without industry input, descriptions of industry competence can only amount to estimates and, further, any training that is done against these untested criteria risks wasting resources achieving inadequate outcomes. So, no matter the system or method, industry must help establish and review criteria for industry competence. This is foundational to industry training systems everywhere.

So, there are clearly some universal, or at least widely applicable, industry training success factors.

Many of these common factors have been outlined in well evidenced frameworks, however, due to the fragmented global glossary of industry training and work-based learning, many of these frameworks reference success against synonymous terms or ancillary concepts. Where these are presented in the following sections, their relevance to industry training and work-based learning is explained.

In the sections below, several significant success factor frameworks are reframed and amalgamated into a useable model for this research. This model is then reinforced by the limited Pacific success factors that were identified through the primary and desk research activities. This model is later used to evaluate the current state of industry training supports in our focus countries and inference what might be needed to establish successful industry training models.

Existing Models of Success Factors

Success Factors for Industry Training have been widely researched but often through specific frames of reference. The varied, evidenced, success factors that exist often do not look at systems comprehensively but are efforts to understand the markers of success for elements of the system such as quality assurance, programme design, or system coordination. This could be because the resource it takes to establish and effectively evidence global success factors is enormous and only within reach of the largest agencies. Or, because more specific frameworks appear to be more useable by audiences, therefore, having more utility.

This is not to say that system level success factors have not been defined. Good examples of frameworks exist from global organisations such as UNESCO, the Commonwealth, ILO, and the OECD as well as national organisations and corporates. Ultimately though, efforts to establish system level success factors are limited by a lack of causal evidence. This is because it is difficult to demonstrate that a particular system level success factor, at an international or even national level, is valid. The scope of impacts that industry training has is so large that it is difficult to establish where the effects of any individual success factor end. Industry training intersects with education and industry. Its impacts go beyond the individuals, employers, education and training providers and other stakeholders who are directly involved with it: increased productivity and quality, among other things, result in cascading and diverse effects on communities, industries, and governments. Additionally, the impacts of any success factors are not created in isolation; successful industry training is the product of many diverse, synergistic, and overlapping stakeholder inputs. Attempting to isolate the effects of individual factors is a challenge that is further complicated by differences in global contexts and differences in available information.

To identify industry training success factors in an absence of causal evidence, assumptions must be made. An example of this is the widely held belief that the presence of a National Qualifications Framework (NQF)[2] is a success factor for both industry training and education generally. Numerous studies have identified the difficulties with establishing NQF impacts and effectiveness (see (Raffe, 2013) and (CEDEFOP, 2017) for examples), however, a significant and increasing number of countries are developing these tools. This is because with some, but not significant, evidence to NQF impacts, there is still validity to the idea that recognising and aligning education programmes lifts standards and enables mobility and learning pathways. Similar examples exist where success factor impacts are not necessarily deeply evidenced in the literature, however, are seen to be important through expert consensus.

So, noting the points above, we have taken a cautious approach to the identification of success factors. Models for successful industry training from the desk research were selected based upon their justifications, evidence, and reputation. Global development agencies typically had the most comprehensive frameworks in this area. This is likely a result of having the greatest access to information and ability to investigate these areas over time.

The frameworks relating to successful industry training that we have analysed in this research are fully described below, though they are fully presented in Appendix 3.

1. *Ten essential building blocks of an effective TVET system*. Taking a whole of government approach to skills development, (UNESCO, 2018)

2. *Six Key Features of an Effective TVET system*. Technical and Vocational Education and Training (TVET) Self-Assessment Toolkit, (The Commonwealth, 2017)

3. *Key Building Blocks for Quality Apprenticeships*. ILO Toolkit for Quality Apprenticeships. Volume 1: A Guide for Policy Makers, International Labour Organisation (ILO, 2017)

4. *Key Features of Quality Apprenticeships*. OECD note on “Quality Apprenticeships” for the G20 task force on employment, (OECD, 2012)

[2] National Qualifications frameworks are tools used to classify and level learning programmes in a country, region, or internationally.

5. *Key Principles of Successful TVET Programmes*. Compass to Workforce Development: A toolkit for policymakers, donors, governments, NGOs, and practitioners. (USAID, 1996)

6. *Principles and Strategies of a Successful TVET Program*. Principles and Strategies of a Successful TVET Program, (MTC, 2010)

7. *Building Blocks of Inclusive TVET Systems*. ILO Guide on making TVET and skills development inclusive for all, (ILO, 2020)

Frameworks 1-4 above are concerned with the systems that enable successful industry training. While these are framed around TVET and Apprenticeships, these concepts are closely related to industry training. TVET is synonymous to WBL; it refers to all forms of learning that deliver workplace relevant knowledge, skills, and competences, both on and off the job. Industry Training involves both these on-job and off-job forms of learning. TVET could be conceptualised as an umbrella of learning models that includes industry training, therefore, the features that enable a successful TVET system will subsequently enable successful industry training.

The models concerned with apprenticeships are highly relevant as apprenticeships are, as previously mentioned, one of the most common models of industry training. So, what is relevant to successful apprenticeship systems will be relevant to industry training systems.

Frameworks 5 and 6 above are concerned with TVET programmes rather than systems. As described above, TVET encompasses an umbrella of learning models including industry training. When analysing these frameworks care was given to exclude success factors that were not relevant to industry training, though there were few of these.

Lastly, framework 7 above describes the building blocks of inclusive TVET systems. This framework is significant, detailed, and is one of a limited number in this area that are concerned with inclusivity. While other studies take a more case study approach to inclusivity in TVET or propose frameworks focused on specific areas such as learners with special needs or disabilities, this framework has a wide coverage. It has practical recommendations from the overarching system down to the design of inclusive buildings and more.

Together, these frameworks enabled a comprehensive and well evidenced analysis of industry training success for our context.

Analysis of shared Success Factors between existing models

The success factor frameworks above are at different levels and for different audiences, though they are all concerned with effective practices enabling or within WBL, therefore, similarities exist. Understanding and applying these shared success factors was essential to evaluating our focus countries in this research. An analysis of these frameworks was performed; an intermediary product of this is attached in Appendix 4. System and programme level success factors integrated neatly, while key factors for inclusive programmes supplemented throughout where appropriate. When deconstructing these frameworks, key success factors emerge within five domains: policy and coordination; regulation; funding; design and delivery; and workforce development. These represent the core functions of modern and integrated industry training systems, Figure 25 see below.

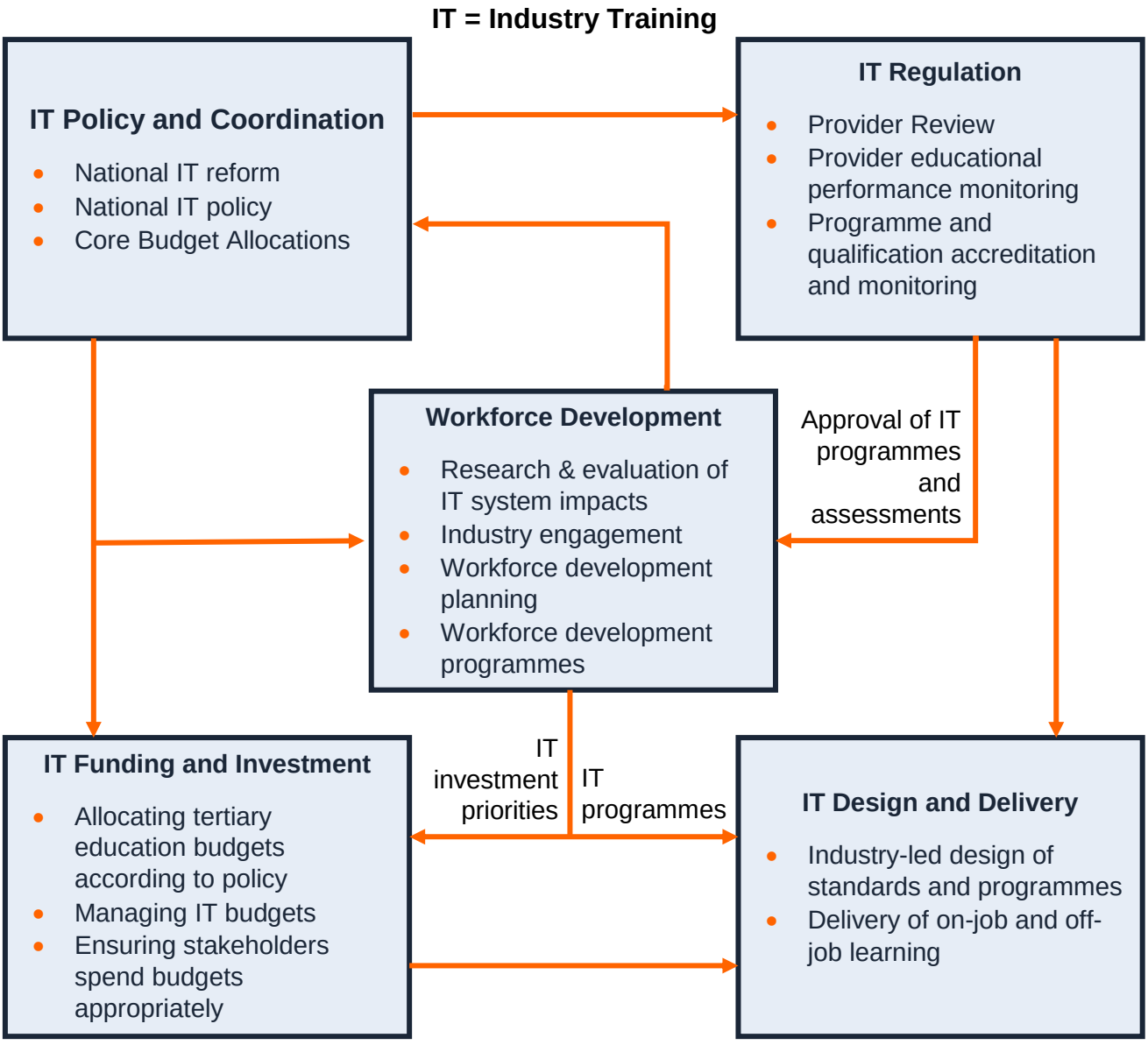


Figure 25: Model of an integrated industry training system.
Source: The Skills Consulting Group, 2021.

These five domains were used to frame a model of success factors for Industry Training that is presented below in Table 35. For interpretation, it should be noted that the term 'providers' in the context of industry training refers to both educational institutions and employers as both are providers of learning in this model.

These factors are sufficiently broad to enable contextualisation to the Pacific context; an analysis explained in the following section.

Table 35: Industry Training Success Factors from the desk research.

DOMAIN	INDUSTRY TRAINING SUCCESS FACTORS
POLICY & COORDINATION	Policy is evidence based and responsive to national, labour market, and learner needs
	Skills policy is well articulated across the policy and governance spectrum, and representative of stakeholders needs and capabilities
REGULATION	Regulatory arrangements are robust and enable effective labour market and programme outcomes
	Programmes and qualifications are well articulated and responsive to learners' needs and capabilities
FUNDING	Funding systems provide the incentives and support needed to sustain participation by learners and stakeholders
	Funding systems drive and sustain consistent and effective provider performance
DESIGN & DELIVERY	Programmes and qualifications are relevant to labour market needs and learner aspirations
	Delivery of learning and assessment is effective, efficient and addresses the educational welfare of students
WORKFORCE DEVELOPMENT	National labour market and workforce development needs are recognised and addressed
	All stakeholders are engaged and contribute effectively to workforce development

Contextualising Successful Industry Training: Pacific Perspectives

The success factors identified in Table 35 are comprehensive and encapsulate success for industry training systems and programmes based on the core pillars of any formal industry training system. They are, however, based off international frameworks that notably exclude Pacific perspectives. It is not uncommon for research in WBL to be biased toward European and higher-income countries; research and development in WBL is often considered a supplement to core WBL activities that many countries cannot afford to resource, therefore, research gaps exist for these countries. Some lower-income countries receive research into their training systems through donor funding, but this is dependent on donor priorities and objectives. While we have made efforts to amalgamate the frameworks with what might be considered universal themes, the contextual limitations of the reference frameworks still pose risks to the applicability and validity of this derived model in a Pacific context.

Context is essential to consider when talking about success factors. What is considered a successful outcome in one context may be different in others. There are cultural, social, economic, and environmental factors and priorities that change not only what successful outcomes are in a particular context, but the appropriate methods to reach those outcomes. These differences can be so large that there is a valid argument for recontextualising success for every industry training system or programme. The resource constraints of this research will not allow full analyses of success for each Pacific country, however, the sections below detail some key concepts that were identified in both the desk and field research that we incorporate into the final working conceptualisation of successful Pacific industry training in this research.

We recommend future work to establish success factors in the Pacific should consider each countries unique context and use co-design principles in close partnership with local communities, however, we have identified some common themes that should be considered when evaluating industry training systems in the Pacific.

Pacific Industry Training Success Factors – Desk Research

Desk research found only fragmented information about successful industry training in the Pacific. Few or no references to successful Pacific industry training emerged: it was unclear whether this was due to a lack of models being implemented throughout the Pacific, a lack of resources to fund WBL research, or other reasons. Some frameworks relating to similar concepts such as TVET or Workplace learning were identified, however, these describe specific areas within a successful training system rather than providing holistic system models. These key resources that were identified are presented and briefly discussed below.

Firstly, an important resource from the desk research is the review of TVET policy and planning in the Pacific Islands by the Pacific Association of Technical and Vocational Education and Training (PATVET) (Bartram, 2004). Although dated, this study describes elements of good TVET policy as identified by PATVET members from a representative cluster of Pacific Island countries. The Cook Islands, Fiji, Niue, Papua New Guinea, Republic of the Marshall Islands, Samoa, Tonga, and Vanuatu provided primary information to the study and Kiribati, Nauru, Solomon Islands, and Tuvalu policy systems were outlined using secondary research.

The good practices for TVET policy that the study outlines are that:

1. Each Pacific country should articulate its national vision for TVET with the objective to establish an adequate labour force with appropriate skills. This should be economically and environmentally viable and contribute to social and cultural development.

2. Due to the small scale of Pacific countries, good policy should facilitate and encourage regional cooperation, while maintaining national integrity.

3. National policies should also establish qualifications frameworks for national recognition and, ideally, regional recognition.

4. National policies should facilitate easier access and sharing of training resources throughout the region.

5. Policy should encourage various modes of delivery, including online, open, distance, and flexible learning, to facilitate access. Where necessary, supplementary policy should be developed to facilitate partnerships.

6. Policy should establish or strengthen means to ensure quality within the system and its delivery.

7. Policy should facilitate the development of good curricula that supports local needs. This may be curricula from elsewhere if suitably contextualised.

8. Policy should clearly identify stakeholders and their responsibilities within the system.

9. Policy should consider the non-government sector; non-government providers of education and training are essential to understanding the Pacific education environment and should be included in policy.

Overall, these priorities are encompassed within our model of success factors from Table 35. When further disaggregating the success factors into their indicators, the important areas to highlight are:

- The increased emphasis on capacity and resource sharing to achieve necessary scale;
- Cooperation through the region whilst maintaining national integrity;
- Incorporating contextualised materials and models from other countries; and
- The inclusion of non-government stakeholders.

This last point also came through strongly in our field research, particularly within the Solomon Islands and Tonga. Both countries have large non-formal education sectors that need to be represented and recognised in policy development: rural training centres as well as church and community education providers.

The strongest theme that emerged and summarises the areas above is regional cooperation. Due to challenges with scale in both the labour market and local economies, successful skills development in many Pacific Island countries is dependent on the ability to share and cooperate regionally, crucially including, but not limited to, the recognition of skills regionally and globally. A good example given in this study was the success of a Maritime course that is recognised by many

Pacific Island Countries and also many globally (Bartram, 2004). Participants in this research noted that quality construction, and its regulation, were variable throughout the Pacific. So, to achieve regional recognition or accreditation, these differences would need to be accurately assessed throughout the Pacific.

Another resource to inform the identification of successful Pacific industry training is the *Guidelines for the Quality Assurance of TVET Qualifications in the Asia-Pacific Region* report from UNESCO (UNESCO, 2017). This report is concerned with the Asia-Pacific region however it should be noted that, out of a total 13 participating countries, the only Pacific representation is Samoa and Tonga. This does not mean that the guidelines will be necessarily less relevant to other Pacific countries, but these should be interpreted with caution and possibly have an Asia region bias.

The underpinning principles given to quality assurance of TVET qualifications in this report are that:

1. There is a clear vision for how QA of TVET qualifications operates across the TVET qualifications system.
2. Organisations involved in QA of TVET qualifications operate with clear and transparent governance arrangements.
3. QA of TVET qualifications practice is appropriately financed.
4. QA of TVET qualifications practice is based on clear and transparent quality standards.
5. QA of TVET qualifications practice addresses conception and formation of qualifications, assessment, validation, and certification processes.
6. Key stakeholder groups are involved in key aspects of QA practice (e.g. conception and formation of TVE qualifications, assessment, validation and certification).
7. Economic, social and environmental dimensions are explicit in QA of TVET qualifications practice, to: maximise access, social inclusion, pathways, articulation, participation of vulnerable groups, and participant retention and completion rates, and prioritise key industry sectors.
8. Barriers to assessment, including for non-formal and informal learning, are minimised.
9. Professionalisation of staff underpins QA of TVET qualifications practices.
10. Continuous improvement underpins QA of TVET qualifications practice; decisions are informed by data and research.
11. Organisations involved in QA of TVET qualifications commit to internal evaluation and cyclical external evaluation, as well as to making public the findings of external evaluations.
12. QA of TVET qualifications practice remains fit for purpose and is sustainable.

13. QA of TVET qualifications practice is enhanced through national and international linkages and cooperation.

Most of these principles are accounted for in our model of success factors. Most quality assurance principles are common and cover ensuring quality of programmes, providers, and outcomes. Notable emphasis from these guidelines is placed on the inclusion of informal and non-formal learning activities; national and international cooperation; and economic, social, and environmental dimensions being explicitly mentioned in QA to maximise access and inclusion.

Lastly, in the absence of significant frameworks based in the Pacific, the New Zealand research into Pacific learner success in workplace settings by Ako Aotearoa has some useful information to inform Pacific industry training success factors (Ako Aotearoa, 2017). The report outlines a two-and-a-half-year pilot study performed with Pacific learners in New Zealand workplaces that aimed to identify, pilot, and evaluate practices that improved Pacific achievement in industry training.

Some of the key recommendations for increasing achievement of Pacific learners in workplace learning were to:

1. Engage with Pacific families and learner support networks
    - Engage as a first step towards sharing information about industry training opportunities and addressing the misperceptions about the value and requirements of workplace learning.

2. Create a culture of motivation
    - Understand what motivates Pacific learners in industry training to establish and develop positive future-focused goals.

3. Implement learning support
    - Use mechanisms that address the negative perceptions learners may have of their own capability and that foster confidence, engagement, and motivation.

4. Provide support for facilitators
    - See facilitators as key roles in industry training and support them to demonstrate an understanding of the lived realities of learners.

5. Contextualise and tailor learning
    - Encourage facilitators to use creative learning support approaches based on an understanding of the strengths of the learners.

6. Take a broad view of Pacific workplace success
    - Build on the programme logic models already developed to engage stakeholders in understanding the value of training interventions and the short, medium and long-term outcomes and indicators of success.

The ideas presented above are novel but evidenced in the New Zealand context. While this study was focused on Pacific learners in New Zealand, there are some relevant considerations for this research. These are particularly important as similar studies in the Pacific were not identified. The recommendations were analysed carefully to incorporate any useful information into success factors for Pacific workplace learning. Key points that emerge from the report and are relevant to this

research are the impacts of culturally relevant learner supports, engaging with family to support the learner, and contextualising learning activities. This last point came through strongly in the field research in terms of the design of programmes, however, the field research did not identify the impacts of contextualising learning methods.

As this study is related to workplace learning, the insights are relevant to the main learning delivery mechanism of industry training models.

Pacific Industry Training Success Factors – Field Research

Success factors were also identified in the primary research. During interviews, participants were asked about what they believed made their training system successful as well as what would be needed to ensure its success in the future. These responses were analysed using semantic and latent methods.

This section presents some of the key factors that were identified to inform and reinforce the model for successful industry training that we will use. The list of key identified factors can be found in Appendix 6 country by country. Understanding the responses at a national level is important as the perspectives that were shared with us, while likely not exhaustive, reflect the priorities of stakeholders within these countries. Below, discussion is focused on common themes between the countries and their implications for models of success. Overall, we saw similarity between the participant-identified success factors and the success factors already listed which indicates good cultural validity of the factors.

A key idea, that was emphasised through the field research, was that industry should be involved in all aspects of the system, from planning through to design and delivery of skills. This is a foundational requirement of industry training systems. Though some perspectives from industry representatives in the research indicated hesitation to engage in these processes, it should be noted that these were a small minority. In these instances, consultation fatigue and a lack of trust in the government's capabilities were reported. In others, employers reported a belief that training should not be their job and that employees should come into the workforce fully trained. These perspectives were vastly outnumbered by supportive perspectives and employers who trained dutifully, even in the absence of formal systems to support their training activities. All types of stakeholders in the research, government, industry, providers, and community, identified industry engagement as a key success factor.

Another reported success factor was the existence of national skills development policy that is easy to understand and outlines clear roles and responsibilities within the system. This viewpoint came through in every stakeholder group that was involved in the research. Though this, seemingly, came through the strongest for two groups of participants: stakeholders operating in unclear systems and stakeholders in countries with little system activity. Stakeholders in unclear systems are wanting their policy to be improved while stakeholders with little system activity are wanting clear policy to be established to create their systems.

In the Solomon Islands, for example, skills policies exist but the system is in a state of change. There are some overlapping responsibilities and policy areas that are working against each other. This was evident in the unclear roles of the labour division of MCILI and the newly established SITESA. SITESA accredits and recognises institutions whereas the Labour division sets trade standards and administers trade certificates. SITESA has now accredited some institutions with

different curriculums to the national trade certificates administered by the labour division, therefore, labour cannot assess these learners. These conflicting actions are the consequence of competing policy direction.

Another example came from stakeholders in Niue who identified the need for clear skills development policy and a focal point to coordinate the system. With no current industry training system in place, initial development of a clear and locally relevant skills policy was seen as important to begin the establishment of the industry training system. The existence of clear national skills policy is important.

In extension to policy being clear and outlining roles, participants identified accounting for disadvantaged and marginalised learners as a success factor for industry training. Many responses from the research identified government as the core, accountable stakeholder for driving change and improving quality of life within their countries. While we identified positive attitudes in the research toward the inclusion of these groups, it was widely noted that government policy would be a strong tool to foster the inclusion of these groups.

In extension, participants identified the recognition of informal, non-formal, and formal non-accredited learning as a success factor. Much of the skills development in construction throughout the Pacific is developed informally or non-formally through non-accredited or recognised training activities. There are large communities of skilled workers that exist throughout the Pacific who are not recognised. Empowering these learner groups with formal recognition of their skills and knowledge provides them opportunities for further training, mobility, and development. RPL and RCC mechanisms were identified as important success factors for the Pacific.

Another broad success factor identified by participants was the need for effective and relevant qualifications and programmes. Specifically, participants identified that, for successful training systems, qualifications and programmes should consider local needs, deliver competences required by industry, and not deliver redundant or locally irrelevant skills. The offerings for formal construction programmes throughout the Pacific, overall, were found to not be relevant to the labour market requirements; either being irrelevant or not at the correct level of competence.

Crucially, workplace learning within current or future industry training programmes should be meaningful and relevant. It was identified by participants that industry and education institutions should coordinate to understand the full scope of development needs and how and where these should be delivered. Workplace learning should be delivered in alignment with an overall training plan for the learner. Competences they acquire and practice both on-job and off-job should be relevant to an overarching graduate profile and should be consistent with their field of study.

In extension, it was identified that success in industry training should also factor in the inclusion of traditional knowledge and skills where appropriate. This would help to retain this important cultural information but also, in some examples, develop more sustainable and locally relevant competences. There are some examples where traditional construction features, such as carving, have been incorporated into modern construction projects. Though mostly aesthetic now, traditional construction knowledge and skills have the potential to be incorporated into wider construction practice as they can teach construction methods using locally available materials. These methods are not only more sustainable but decrease national reliance on external construction materials. The reliance on external construction materials was a commonly identified barrier in the smaller Pacific Island countries of this research.

To support the quality of these qualifications and programmes, it was identified that, for successful industry training, effective monitoring and quality assurance mechanisms should be in place for both education institutions and workplaces who provide training. It was suggested in the research that monitoring should be independent and clear.

The creation and strengthening of national building codes and standards was also identified as a feature of construction industry training success. If necessary, creating professional registrations in certain specialisms of the construction sector to better manage these standards and create trust in the workforce. Construction is a critical sector for the Pacific, delivering cross-sectoral outcomes on health, resilience, and others. The lack of construction standards and professional registrations in many contexts contributes to a lack of quality infrastructure and skills development outcomes; construction standards may help to define training standards.

Another success factor that was emphasised through our research, overall, was that regional cooperation may be important for the future and sustainability of Pacific industry training systems, although, this would need to be balanced against each country's unique context. This was particularly relevant to smaller Pacific countries without this recurring resource to allocate to industry training systems or those dependent on international funding for their budgets.

This regional cooperation influences another stated success factor: to have clear learning pathways and labour mobility both nationally and internationally. Learning pathways create many benefits to individuals and countries, particularly in equity, employability, and resource efficiency (IIEP-UNESCO, 2020). National formal learning pathways were overall seen as important to a successful industry training system in this research, but international learning pathways had more mixed responses. Integrating with international learning pathways enables access and scale that many smaller Pacific countries would benefit form, however, these benefits are also moderated by the emigration impacts of such pathways. Whilst being seen as a success factor to some, others who participated in the research emphasised that a marker of success should be an industry training system that retains skilled workers in local economies. With many Pacific Island countries experiencing a net loss of skilled workers, successful industry training systems may need to consider including methods to retain workers their countries of training. With the relative impacts of regional labour mobility and retaining skilled workers uncertain, we have chosen to include both in different ways in our contextualised model. Industry training systems should consider their skills development pipeline and measure success by meeting their needs for labour at any point in time. Proper incentives and regulation should exist to offer regional pathways where appropriate which enable labour mobility but ensure national skills requirements are met.

Regardless of pathways, the accreditation of education providers and qualifications was seen as a marker of success across all countries in this research. This accreditation ensures quality within the system and enables formal learning pathways to be made. A small number of responses indicated that workplace providers of education should be accredited as well as education institutions. There is not enough evidence from the field research to suggest that this can be generalised to a success factor for the Pacific, however, participants noted generally that workplaces providing training should be effectively monitored.

Stakeholders from all countries also suggested that a success factor for industry training is having efficient and sufficient funding to be able to sustain programmes. In other words, having the right amount of funding, that is used efficiently, and enables a sustainable skills pipeline. It was also mentioned that the sources of this funding should be sustainable and equitable. Costs of industry training should be shared equitably between stakeholders of the system: government; industry and employers; training providers; and learners and communities.

Lastly, participants identified that successful industry training systems should have national planning and coordination efforts. These should include all key stakeholders; be focused on identifying and planning for future skills needs of the country and its industries; and aim to connect skills supply with skills demand.

Key Contextualisation Points from the Desk and Field Research

Table 36 below summarises the key factors impacting success for Pacific industry training that we identified in the desk and field research. We used these to guide our contextualisation of the success factors from the global frameworks in Table 35.

Table 36: Summary of key factors impacting success for industry training systems in the Pacific from the desk and field research.

Desk Research Key Factors	Field Research Key Factors
• Emphasis on capacity and resource sharing to achieve necessary scale. • Cooperation through the region whilst maintaining national integrity. • Incorporating contextualised materials and models from other countries. • Inclusion of on-government stakeholders. • Inclusion of formal and non-formal learning activities. • National and international cooperation. • Inclusion and access principles being explicitly mentioned in quality assurance. • Provision of culturally relevant learning supports. • Contextualising learning activities locally and culturally.	• Industry should be involved and engaged in all aspects of the system, from planning to design and delivery. • National skills policy exists and identifies clear roles and responsibilities. • Government policy covering and advocacy for disadvantaged and marginalised learners. • Recognition of informal, non-formal, and formal non-accredited learning. • Qualifications and programmes are effective and relevant. • Workplace learning activities within programmes are meaningful and relevant. • Industry training includes traditional knowledge and skills where appropriate. • Effective quality assurance mechanisms are in place for education providers. • National industry codes of practice and professional registration where appropriate. • Regional cooperation for skills development and planning. • Learning pathways exist, both nationally and internationally. • Skills development systems ensure enough skilled workers are available to meet national needs. • Providers and qualifications are accredited. • Funding is efficient and sufficient to sustain the system.

Desk Research Key Factors	Field Research Key Factors
	• National planning and coordination efforts should exist for skills and industries.

Developing the Working Model

To develop the working model, priority was given to factors that Pacific stakeholders provided in our field research. Where gaps existed in our field research, information from the desk-research filled these.

The success factors that were identified in the global frameworks were scrutinised based upon the Pacific conceptions of success from both the desk and field research. The high-level success factors held up to scrutiny using this evidence and were left unchanged.

To make the success factors more useable, we have assigned each success factor with indicators. To identify the indicators of these success factors, the global frameworks, Pacific field research, and Pacific desk research were analysed. The emerging indicators of success were grouped against the success factors. Emerging indicators of success were then refined based upon significance and integrated into the working model against each success factor.

The global frameworks that related to inclusive WBL were included in the exercise above, however, were given another opportunity to frame the indicators after this list was put together. Each indicator was examined for its impacts on inclusivity based upon the recommendations from these global frameworks, importantly the ILO *Building Blocks of Inclusive TVET Systems* (ILO, 2020). Indicators were then reworked into a final list that is presented, alongside corresponding success factors, in Table 4.

Appendix 13: Key Demographic and Economic Data for Focus Countries and Comparators

Table 37: Pacific countries key indicators: Land area, Population, Population Density, Total Fertility Rate, and Population Growth Rate.
Source unless stated for Land Area, Population, and Population Density: Data Portal. (The World Bank, 2021)
Source unless stated for Fertility Rate: Key Indicators for Asia and The Pacific 2020. (Asian Development Bank, 2020)
Source unless stated for Population Growth Rate: The World Factbook. (Central Intelligence Agency, United States of America, 2021)
Note: All values are within the years stated or most recent estimates available.

	Land Area (km^2)	Population (2020)	Population Density (Per km^2)	Total Fertility Rate (Per woman) (2018)	Population Growth Rate (Average annual %) (2021)
Australia	7,692,020	25,687,040	3.3	1.7	1.31
Papua New Guinea	452,860	8,947,030	19.8	3.6	1.93******
New Zealand	263,310	5,084,300	19.3	1.7	1.28
Solomon Islands	27,990	686,880	24.5	4.4	1.75
New Caledonia	18,280	271,960	14.9	1.9****	1.22
Fiji	18,270	896,440	49.1	2.8	0.46
Vanuatu	12,190	307,150	25.2	3.8	1.67
French Polynesia	3,520	280,900	79.8	1.8****	0.75
Samoa	2,830	198,410	70.1	3.9	0.61
Kiribati	810	119,450	147.5	3.6	1.05
Tonga	720	105,700	146.8	3.6	-0.23
Federated States of Micronesia	700	115,020	164.3	3.1	-0.64
Guam	540	168,780	312.6	2.8****	0.18
Palau	460	18,090	39.3	2.2	0.38

	Land Area (km^2)	Population (2020)	Population Density (Per km^2)	Total Fertility Rate (Per woman) (2018)	Population Growth Rate (Average annual %) (2021)
Northern Mariana Islands	460	57,560	125.1	2.7****	-0.36
Niue	260*	1,639***	6.3	2.7	-0.03
Cook Islands	237*	17,583***	74.2	2.1	-2.46
American Samoa	200	55,200	276.0	2.3****	-2.1
Republic of the Marshall Islands	180	59,190	328.8	2.9	1.37
Wallis & Futuna	140*	11,011***	78.7	1.7****	0.26
Tuvalu	30	11,790	393.0	2.9	0.85
Nauru	20	10,830	541.5	2.7	0.42
Tokelau	12**	1,378***	114.8	4.5*****	-0.01

* Source: Country Profiles. (Encyclopaedia Britannica Online, 2021)
** Source: Tokelau: A true small island developing state. (Government of Tokelau, 2021)
*** Source: (Worldometers, 2021)
**** The World Factbook. (Central Intelligence Agency, United States of America, 2021)
***** Situation Analysis of Children in Tokelau. (UNICEF, 2017)
****** Data Portal. (The World Bank, 2021)

Table 38: Key Economic Indicators for the Pacific
Source unless stated for GDP: Data Portal. (The World Bank, 2021)
Source unless stated for Unemployment and Real GDP (PPP): The World Factbook. (Central Intelligence Agency, United States of America, 2021)
Note: All values are within the years stated or most recent estimates available.

	Real GDP (USD millions) (2020)	Unemployment (% of total labour force)	Real GDP (PPP) Per capita (2019)
Australia	$1,330,900.93	5.2 – 2019	$49,854
Papua New Guinea	$23,591.52	2.7 – 2017 *****	$4,326.40
New Zealand	$212,482.01	4.1 – 2019	$42,888

	Real GDP (USD millions) (2020)	Unemployment (% of total labour force)	Real GDP (PPP) Per capita (2019)
Solomon Islands	$1,551.25	2 – 2019 ******	$2,663
New Caledonia	$9,566.00*	14.7 – 2014	$31,100
Fiji	$4,376.01	4.5 – 2017	$13,684
Vanuatu	$854.79	1.7 – 1999	$3,153
French Polynesia	$5,954.00*	21.8 – 2012	$17,000
Samoa	$807.03	5.2 – 2017	$6,521
Kiribati	$199.57	30.6 – 2010	$2,272
Tonga	$512.35	1.1 – 2011	$6,383
Federated States of Micronesia	$408.06	16.2 – 2010	$3,464
Guam	$6,311.00	4.5 – 2017	$35,600
Palau	$268.35	1.7 – 2015	$17,579
Northern Mariana Islands	$1,182.00	11.2 – 2010	$24,500
Niue	$43.54**	12 – 2001	$5,800
Cook Islands	$384.00*	13.1 – 2005	$16,700
American Samoa	$638.00	29.8 – 2005	$11,200
Republic of the Marshall Islands	$239.46	36 – 2006	$3,889
Wallis & Futuna	$171.50***	8.8 – 2013	$3,800
Tuvalu	$48.86	8.5 – 2016	$4,281
Nauru	$118.22	23 – 2011	$11,583
Tokelau	$9.40****	2 – 2015	$6,004

* UNCTADSTAT Data Portal. (United Nations Conference on Trade and Development, 2021)
** National accounts estimates, 2018. Niue Statistics Office, (Statistics Niue, Government of Niue, 2021)
*** Wallis & Futuna Country Profile, 2018 Value. (NZ Ministry of Foreign Affairs and Trade, 2021)

	Real GDP (USD millions) (2020)	Unemployment (% of total labour force)	Real GDP (PPP) Per capita (2019)

**** 2015/16 GDP estimate. (Government of Tokelau, 2017)
***** The World Factbook. (Central Intelligence Agency, United States of America, 2021)
****** IMF Data Portal. (International Monetary Fund, 2021)
******* Data Portal. (The World Bank, 2021)

Appendix 14: Models of Industry Training from New Zealand and Australia

New Zealand Industry Training Models

New Zealand has an established and effective Industry Training sector with many models of delivery present. Practitioners who gain competence through informal or non-formal means can be assessed against New Zealand standards and qualifications through recognition of prior learning (RPL) and recognition of current competence (RCC). This is an effective method to include learners, for instance, during changing professional or academic registration requirements or to recognise competence gained within other qualification systems internationally in locations without mutual recognition of qualifications (UNESCO, 2015).

The core delivery mode for industry training is however in the formal system. Formal industry training models in New Zealand are highly integrated, however, this system is currently in a state of substantial reform, due to be complete in 2022. The current system is outlined below and figures show both the current (Figure 26) and proposed (Figure 27) systems on the following pages.

Central government sets and administers national policies and frameworks as well as requirements and funding arrangements. This direction comes from the Ministry of Education and the Ministry of Business, Innovation, and Employment who are tasked with education and skills policy respectively. Vocational training pathways begin in schools with work-based learning and workplace experience programmes being integrated with secondary education qualifications. After which, learners have pathways directly into formal TVET providers and programmes or industry training programmes.

TVET providers and programmes support industry training systems by offering off-job training that supplement on-job training activities. The diversity of training providers and programmes allows for industry training learners to meet their needs for off-job learning flexibly and around their working schedules.

Industry training programmes in New Zealand are managed through employer-led Industry Training Organisations (ITOs). The functions of these being to:

- Assess industry skill demand;
- Develop and maintain national occupational standards for industry training programmes;
- Quality assure these national skill standards; and
- Broker formal training for learners to meet the needs of employers. They also manage apprenticeships.

ITO's leave the training of learners to workplaces and TVET providers but perform essential functions to the industry training system. They create the industry training programmes and national skill standards in close partnership with industry; they quality assure these programmes overseen by a higher external regulatory body; and they keep track of industry skill demands.

ITOs also act as an intermediary between government bodies, industry, training providers, and learners to help them navigate and access the system. ITOs have set industries which they may exclusively operate within to ensure specialisation and that every industry has sufficient attention.

Quality assurance occurs within providers of education and training through self-assessment and centrally within the New Zealand Qualifications Authority (NZQA) who has the role to, among other things, provide quality assurance of non-university tertiary education providers and administer the New Zealand Qualifications Framework (NZQF). The NZQF lists all formally recognised qualifications and national occupational standards in New Zealand.

With a single NQF, qualifications are recognised cohesively throughout New Zealand and New Zealand is involved in several international recognition agreements, namely:

- The Lisbon Recognition Convention (Council of Europe, 1997)
- The Asia-Pacific Regional Convention (UNESCO, 2011)
- Trans-Tasman Mutual Recognition (New Zealand Government, 1997)

Funding for the industry training system occurs through the Tertiary Education Commission (TEC) which is the single funding body for all tertiary education in New Zealand. The organisation allocates tuition and training subsidies to tertiary education organisations based on agreed investment plans by these organisations submitted every 2-3 years. Funding is also based on outcomes of learning activities, such as the number of completions, rather than inputs, such as the number of enrolments. This incentivises a performance-based system. Overall funding levels are set through the government's budget process and funding instructions to the TEC.

New Zealand's Industry Training System is, however, in a state of change. A review of vocational education in recent years has resulted in a move to reallocate and further centralise system responsibilities. A core change is that ITO functions are being distributed to two new bodies from 2021 onwards. The arrangement of training will move to a newly established national polytechnic, Te Pukenga; this was established as an amalgamation of regional polytechnics in 2019. Newly established Workforce Development Councils (WDCs) will take on the development of industry qualifications and training programmes. TEC will take have responsibility for assessing industry skill demand.

In summary, the functions are being redistributed rather than repealed; they are all essential functions of the system that enable successful industry training.

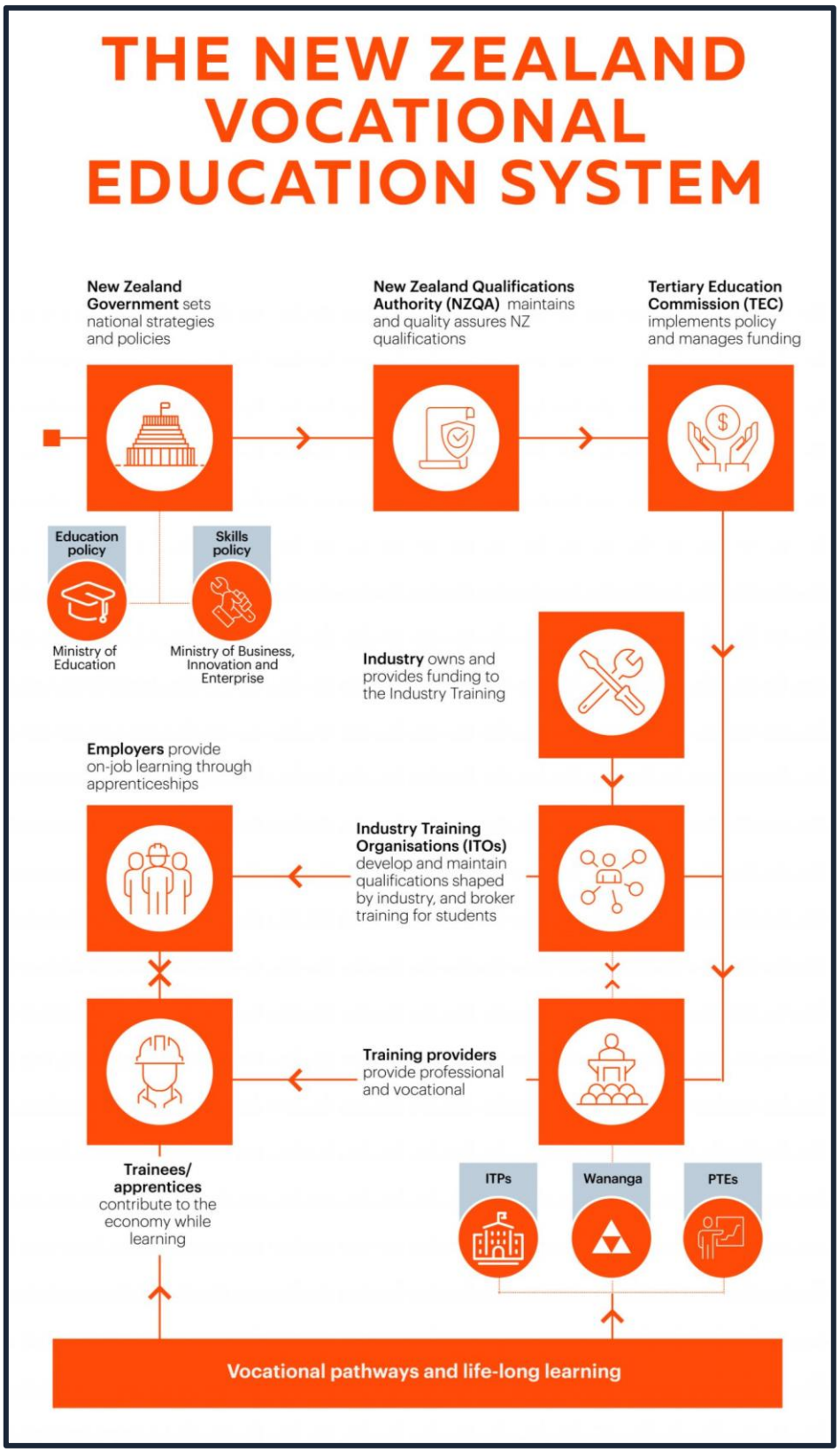


Figure 26: New Zealand Vocational Education and Training (VET) System before Reform of Vocational Education Structural Changes.
Source: The Skills Consulting Group, 2021.

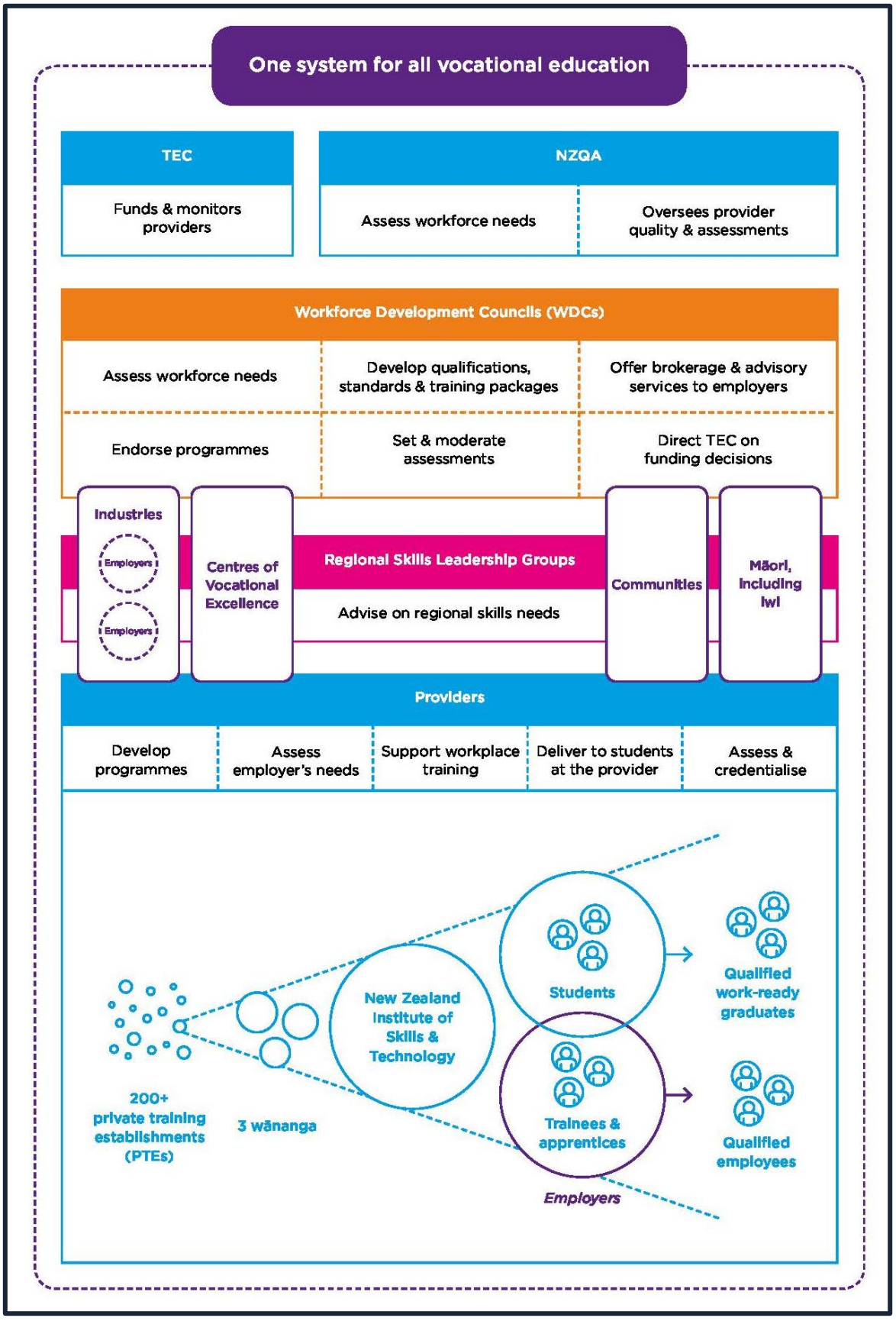


Figure 27: New Zealand Vocational Education and Training (VET) System after Reform of Vocational Education Structural Changes.
Source: Summary of Change Decisions, Reform of Vocational Education. (Government of New Zealand, 2020)

Australian Industry Training Models

A range of industry training models are offered in Australia. Informal and Non-formal industry training exist naturally in the sectors and Australia has mechanisms to recognise these modes and formalise them through RPL and RCC. Formal industry training is supported by a national policy, regulatory, and monitoring system.

Australia's large and nationally coordinated Industry Training system is designed, administered, and managed at a federal level by the Department of Education, Skills and Employment (DESE) and at a state level by State and Territory Training Authorities (STAs). The system is informed by a national VET Regulatory Framework and a VET Quality Framework. These set the standards for regulation of the system and standards for training organisations, programmes, and standards, among other things. Centralised and dedicated policy directed to industry training gives clarity to stakeholders and actors within the system, however, the Australian system has many stakeholders within it and differences between federal and state responsibilities can be confusing for stakeholders (OECD, 2008). Some national efforts have been made to clarify the system for those who navigate it, such as Australian Apprenticeships and My Skills by the Department of Education and Training.

The system is regulated at a federal level by the Australian Skills Quality Authority (ASQA). For the states of Victoria and Western Australia, regulation of the system occurs through The Victorian Registration and Qualifications Authority (VRQA) and Training Accreditation Council (TAC) respectively within each state. These organisations ensure that training providers and training within the system meets specified standards. The Australian Industry and Skills Committee (AISC) also provides regulation through the quality assurance and approval of training packages and the advocacy for industry perspectives to be included in federal and state thinking, as an industry-led body.

Industry Reference Committees (IRCs) assess industry skill needs and develop and review training packages, overseen and supported by Skills Service Organisations (SSOs). Training packages define the knowledge sets, skills, and attitudes needed by learners in particular occupations; they set the standards which learners in an industry must meet. Formal programmes do not need to use these training packages, but these are nationally recognised skills standards for industry. The training packages can only be delivered by Registered Training Organisations (RTOs) which can be public or privately owned and operated and can be linked with industry. RTOs interests are represented at a group level by RTO peak bodies and there are six main types of RTOs in Australia (Government of Australia, 2021):

- Private RTOs
- TAFE Institutes
- Community RTOs
- Schools
- Enterprise RTOs
- Universities

Training Packages are formally recognised industry training curriculums in Australia. These training packages set out the standards and qualifications that effectively assess occupational competence and, importantly, ensure formal training is consistent and standard across the country. Employers and employer groups have input into the design of training packages by explaining industry competence requirements – the ultimate outcome of industry training.

Workforce development planning is supported in Australia through national data collection and dissemination by the National Centre for Vocational Education Research (NCVER). Additional support is given a National Careers Institute and a National Skills Commission; providing career information and data relating to workforce skill needs respectively.

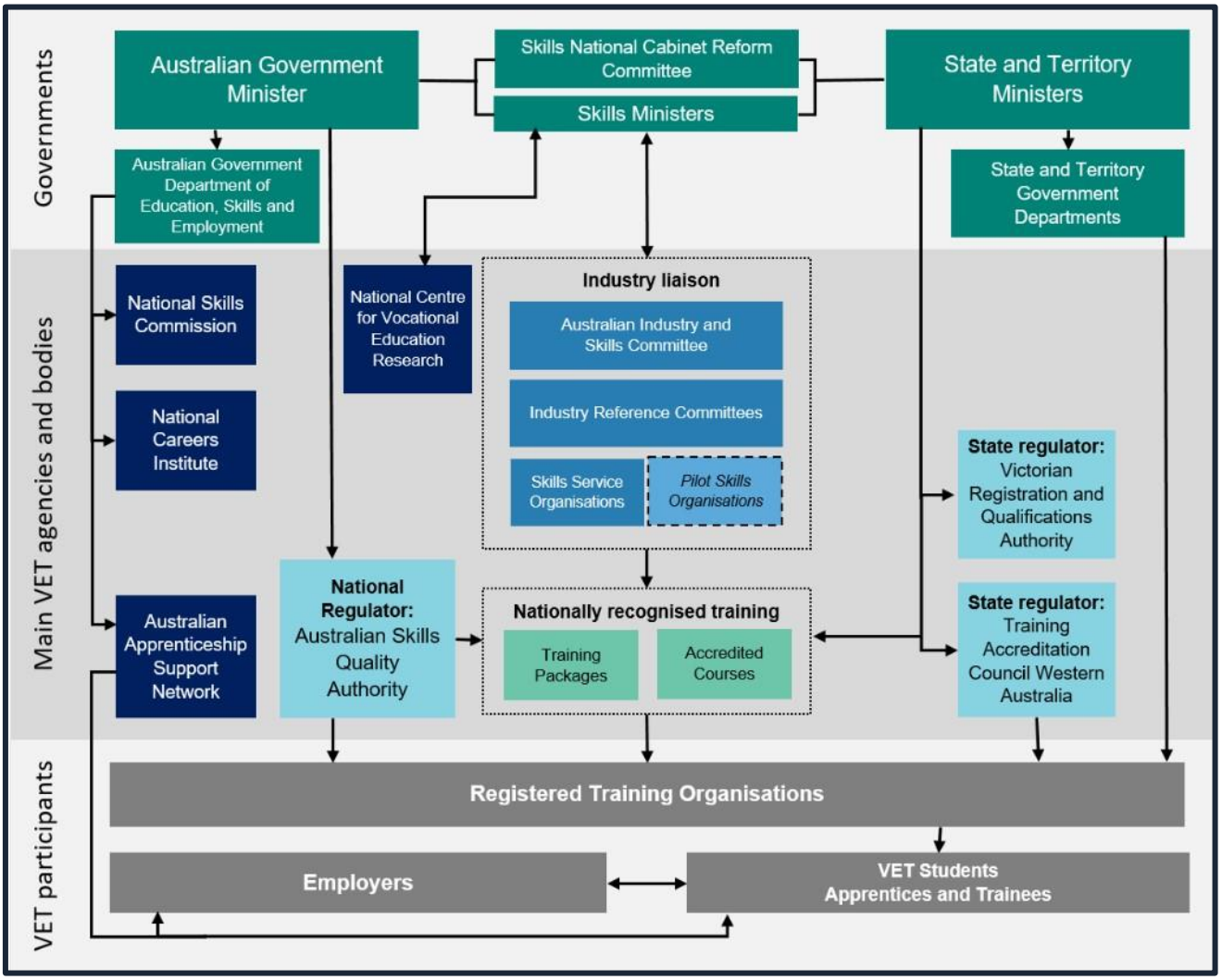


Figure 28: Australian Vocational Education and Training (VET) System.
Source: (Australian Industry and Skills Committee, 2021)

Appendix 15: Detailed Methodology for the Research

Approach

This research was designed and conducted according to New Zealand's International Cooperation for Effective Sustainable Development principles. These being:

- **Effective**: values-driven, partnership-focused, dynamic, evidence-based.
- **Inclusive**: that address exclusions and inequality created across all dimensions of social identity, while promoting human rights, and equitable participation in the benefits of development.
- **Resilient**: that promote resilience, including to the impacts of climate change, natural disasters, and external shocks.
- **Sustained**: that responds to context and is locally owned.

These were supplemented by the values of the Skills Consulting Group staff and partners as well as the values that have framed our field research and interactions with stakeholders:

- **People-centred**
  - Working closely with our stakeholders to ensure we understand their perspectives and contexts.
- **Honest**
  - Working with integrity, understanding, and with the locally identified and best interests of our stakeholders in mind.
- **Inclusive**
  - Broadly considering those who might be impacted by this work and giving all an opportunity to be heard; particularly those in disadvantaged and marginalised groups.
- **Partnership**
  - Working alongside our stakeholders to access expertise and experience, providing support throughout where necessary, and involving them in decision making where possible.

The limited research in industry-based training in the Pacific also impacted our approach. Information about these topics appeared to be infrequently collected; often contained in research which combines Asian and Pacific focuses; or not publicly available.

This was compounded by the narrower research focus of the construction sector and the inclusion of disadvantaged and marginalised groups. This narrower research focus within an already under-researched area made low data availability highly likely and a key risk for the research.

To mitigate low data availability, an adaptive approach was used for data collection. Information was identified and reviewed throughout the course of the project and was collected using mixed methods. Desk research was pragmatic: pockets of data were reviewed deeply when these were found, and databases were moved through swiftly to enable a sufficient span of publications to be reviewed and search terms to be used. Field research was flexible: local researchers were given

research tools that gave answers to the core research questions but were flexible enough to gather supporting information.

Data Collection

Methods

A combination of desk research and field research was used to collect information. Desk-based collection methods were performed by SCG consultants from New Zealand and field research was performed by experienced local researchers in the six focus countries.

The methods for data collection included Boolean searches of online databases, reference mining, information requests from data holders, and stakeholder field research. These are explained in Table 39 below.

Table 39: Methods of Data collection.

Database Searches	Boolean searches of Google Scholar, ERIC, VOCED+, The Pacific Community (SPC) Resource Centre and Pacific Data Hub were performed using combinations of search terms shown in Table 40.
Reference Mining	Significant articles identified in the database searches had their reference sections reviewed for any key publications to include that were not picked up in the database searches.
Information Requests	Representatives from local Chambers of Commerce, Ministries of Education, Ministries of Infrastructure, and employer groups were contacted to request information relating to this research. Particularly where the most significant data gaps were identified.
Stakeholder Field Research	Local researchers were contracted to collect information and perspectives from local stakeholders to industry training, the construction sector, and work-based learning generally. Individual, small panel, and focus group interviews were used to collect this information.

Table 40: Search terms for desk-based research.

Country specific	Technical (Education)	Technical (Sector)	Technical (Labour Market)
Niue	Human Capital	Building	Industry
Cook Islands	Industry Training	Carpentry	Informal skills
Rarotonga	Industry-based Training	Construction	Informal economy
Tonga	Tertiary	Construction industry/sector	Skills economy
Nuku'alofa			Skill demand

Country specific	Technical (Education)	Technical (Sector)	Technical (Labour Market)
Kiribati	Tertiary education	Joinery	Skill supply
Tarawa	Training	Infrastructure	Employment
Tokelau	TVET	Public infrastructure	
Solomon Islands	VET	Plumbing	
Honiara	Vocational	Drain laying	
	Vocational Education	Electrical	
	Work-based Learning	Infrastructure Development	
	Workplace Learning	Utilities	
	Workforce Development		
	Skills development		

Stakeholder research was the most significant source of data due to the low availability of information in public databases and information requests being largely unsuccessful.

New Zealand and local research partners collaborated to identify local stakeholders who would have deep understandings of the local skills development systems and construction sectors. Key stakeholder groups that we identified were:

- *Government representatives*.
    - Ministries responsible for Education and Training; Labour, Employment, and Human Resource Development; Gender and Inclusivity; and Infrastructure and Sustainable Development were commonly identified as key stakeholders to this research.
- *Education and Training Providers*.
    - Local Education and Training Providers were essential to understanding the skills development systems, particularly the formal aspects of these systems.
- *Employers and Industry Representatives.*
    - Employers are fundamental to industry training models as the dominant location of skills development in this mode. We sought private and public employer participation wherever possible in this research.
- *Community and Voluntary Organisations.*
    - In many instances, community and voluntary organisations were relevant to understanding the skills development systems. Being involved as either informal providers of learning and training or as advocates for particular groups and community development strategies.

In our focus countries, with the resources available, we aimed to secure an even distribution of perspectives from these four groups. Our approach was, however, flexible enough to allow not only our local research teams to guide the stakeholder selection with their knowledge, but to allow stakeholders to recommend others to engage with. This meant that the stakeholder selection was driven by local context and stakeholders were treated as partners.

Face-to-face consultations were the dominant method of data collection in the stakeholder field research; this is an important element of engaging with Pacific stakeholders. Due to travel and time constraints, as well as some stakeholder preferences, some consultations were held over the phone or virtually, using online meeting software. In one case, a local researcher briefed a community leader to conduct information gathering on our behalf and submit results.

Research tool

All stakeholder field consultations in this research used a common research tool with derivations of the tool being used to support discussions in local contexts.

Desk research and input from local researchers informed the design of these tools. Significant gaps in data were identified during the desk research, resulting in the need for local research to probe deeply into each research question. The limited depth of quantitative tools makes them inappropriate for this type of research.

A broad qualitative research tool was identified to be the most effective for this research. Such a tool could capture perspectives from multiple stakeholder groups representing the diversity in the training system as well as a diversity of roles within the system.

A semi-structured interview schedule was developed to meet these requirements. A copy of this interview schedule can be found in Appendix 8. A strengths-based and context-sensitive design was used to create this. Questions were formatted so that they did not contain assumptions about existing challenges and that perspectives were gathered through a local frame of reference. Responses were also collected against universal functions of work-based learning systems thus enabling participants to freely provide unique local context that is less influenced by system-level assumptions.

This approach ensured that:

- Questions would be relevant between countries, as well as within them, making insights highly comparable,
- Questions would be less influenced by researcher biases, learning models, and system knowledge; and
- Questions would not be subject to negative biases.

The interview schedule was used for groups of all sizes in the stakeholder research. Questions were structured so that they could inform focus group discussions or facilitate more direct lines of questioning for smaller groups and individuals. This was achieved through open key questions and directing prompts.

Prompts and researcher guidance was included with each key question to ensure mutual understanding and focus. The interview schedule also includes a short project and system overview to help local researchers to communicate outcomes and maintain clarity of concepts during the interviews.

This research tool was shaped by cultural and local feedback from our local research teams. In some cases, namely Tonga and Tokelau, the tool was translated into the local language to facilitate local language interviews. Cultural and language factors were considered when designing the questions so that this would be possible.

Local research capacity

Local capacity involved in the project were researchers with diverse experiences within the focus countries. To ensure sensitivity to cultural differences, where possible, researchers who were integrated in local communities and spoke the relevant languages were selected. Some researchers were, however, highly skilled expatriates with residency in their relevant countries. In these instances, appropriate translation and research support was sub-contracted.

In some Pacific contexts, participation in the research is mediated by the seniority and expertise of the researcher. We recruited senior researchers with local expertise and networks where possible.

A high-level summary of the local research partners that assisted the project is provided in Table 41 below.

Table 41: Summary of local researcher capability.

Cook Islands	Independent research contractor. Highly skilled qualitative researcher with significant experience in the education sector. Has significant local knowledge and networks to support the research.
Kiribati	Research specialist in the Kiribati government. Allows easy access to Ministry of Education officials and insights with a good knowledge of the local education sector.
Niue	Senior government employee. Has good networks across the construction sector, is aware of current construction projects, and has government contacts through her position.
Solomon Islands	Director of independent consulting company. Highly experienced and qualified social sciences researcher. Has been working to improve digital connectivity in the Pacific and has strong construction sector networks and knowledge.
Tokelau	Former government employee. Immense knowledge and experience of the Tokelauan context and previously worked with intergovernmental agencies on social protection research.
Tonga	Director of local tertiary institute arranging for internal research team to perform the research. Capable graduates performed the research under close guidance of senior lead researchers. The institution is highly experienced in using this model of research facilitation and runs construction courses too, therefore, they have significant networks in the construction sector and payments for the research will be taken off graduates' student debt.

Research Briefing

To ensure that the tool was used correctly, local researchers were briefed on its context and use using Microsoft Teams sessions. These ensured that researchers understood the project and what

was required of them. All parties were made aware of how this research conceptualises the different modes of learning and the scope of the project. The briefing session covered:

- Project information including:
  - Background, client, and intention of the research.
  - Research questions.
  - Research principles.
- An overview of key concepts relating to the project including:
  - Work-based learning, industry training, on-job learning and related terminology.
  - A conceptualisation of Work-based learning modes, assessment, and industry needs.
  - An overview of the work-based learning system.
  - An understanding of how we will be conceptualizing the construction sector in this research.
- Outputs and timeframes:
  - Key outputs including:
    - Stakeholder map and analysis for approval.
    - Arrangement and facilitation of research including ethical considerations. Note that a participant information sheet will also be provided to prospective stakeholders containing standardised ethical information for participants.
    - Delivery of results including format.
- Process for the field research.

Data Analysis

The stakeholder field research provided the richest and most relevant insights to this report. Its findings form the foundation of the report with information from the desk research, Boolean searches, Reference Mining, and Information Requests, supplementing this where possible.

Stakeholder field research

Interview notes were translated, transcribed, and, in some cases, summarised by local research teams. Where summaries were used, local research teams provided key meanings as framed by the researcher briefing session and research outcomes. Notes were delivered in Microsoft Word and PDF formats to the New Zealand research team.

A thematic analysis was performed on the data using a semantic approach with summary notes and both a semantic and latent approach with direct transcriptions. QDA Miner software was used to assign and develop codes and Microsoft Excel was used to sort and interpret coded information. One coder performed this analysis to limit inter-rater reliability issues. Codes used in this analysis were largely pre-defined as our research tool was semi-structured, however, codes were added in the process to better represent the themes in the data.

The codebook is shown in Figure 29 below; a presentation of counts of these codes by country in given in Appendix 7. Information was then sorted and exported, and another thematic analysis of the grouped information was performed to ascertain the most significant themes in four areas: models, areas of success, challenges/barriers, and opportunities.

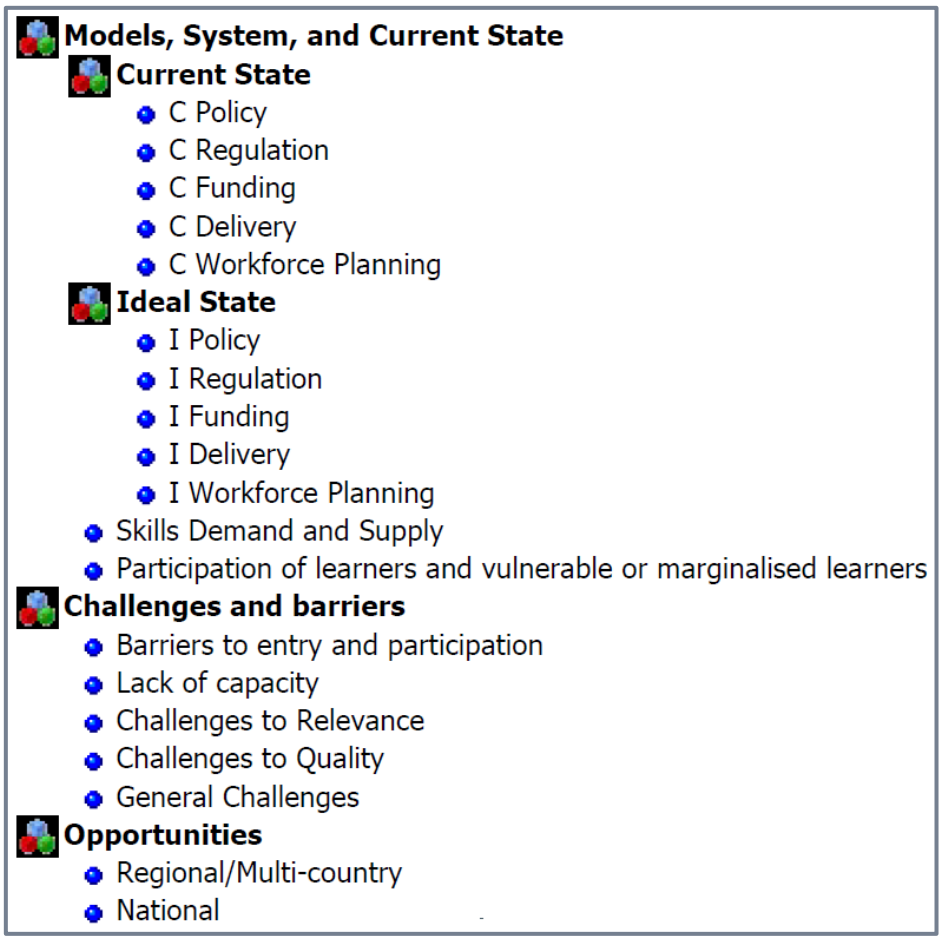


Figure 29: Codebook for Field Research Analysis.

Desk research

A similar approach was used with the Boolean searches, Reference Mining, and Information Requests, but at a higher level. Themes were identified and grouped against a set of high-level codes to enable a wide set of documents to be analysed. These were:

- Success or Success factor
- Enabling factor
- Challenge
- Solution or Opportunity
- Risk
- Information

Multiple categorisations were assigned to arrange the information including country, code, and sub-code. The most common sub-codes that emerged, in order of prevalence, are presented in Table 42 below.

Table 42: Most prevalent codes and sub-codes in the desk research organising activity.

CODE	SUB-CODE

Challenge	Greater participation of vulnerable or marginalised individuals
Challenge	Lack of data
Solution or Opportunity	Leveraging migration and remittances
Challenge	Reduced reliance on development funding
Solution or Opportunity	Greater national vision and direction for TVET
Solution or Opportunity	Improving relevance of skills to labour market
Challenge	Improving access to TVET
Challenge	Unemployment
Challenge	Need for greater financing
Success or Success Factor	Regional providers of Education
Enabling factor	Regional cooperation
Challenge	Geography
Challenge	Greater youth participation in education systems
Risk	Climate change costs
Challenge	Secondary school completion rates
Challenge	Imported skills
Solution or Opportunity	Increase availability of TVET
Solution or Opportunity	Online Learning
Solution or Opportunity	Greater workforce planning

Challenges and Limitations

Challenges

The research was subject to several key challenges resulting from the selected methodology, the subjects, and the context and locations. Those identified by MFAT, and the research team, are provided in Table 43 below with the strategies that were used to mitigate these.

Not all the risks described below were able to be completely mitigated. This project's completion report will give more detail to these points and provide recommendations for future work.

Table 43: Key Challenges and Mitigations for the research.

Key Challenges	Mitigation Strategy
Data Availability	An adaptive approach was taken to data collection. Multiple methods were used and each methods' findings informed iterations on the overall collection approach. This report lists key limitations to the research and its conclusions.
Research permits and approvals	Local researchers used their knowledge and contacts to support research applications and discussions. Supporting evidence to applications was developed and distributed to decision makers.
Travel Restrictions	Partnership with local research teams enabled the successful delivery of in-country qualitative research without the ability for NZ representatives to travel. Special travel arrangements were made where necessary to enable local research within the project budget.
Low access to key stakeholders	Local research partners utilised their significant networks to access stakeholders. The NZ team put forward formal appeals for participation and engagement in circumstances where participants needed these.

Limitations

Importantly, desk research identified a low level of existing information in areas relating to the research. Quantitative information was not available for assessment of skills demand and supply, and similar metrics. This limits the confidence which we can ascribe to any estimations of effect size or scale. Consequently, qualitative conclusions from this report are limited by the lack of quantitative information. These conclusions are, however, formed through consultation with representative stakeholders from key groups in our focus countries; we can be reasonably confident of their validity and representativeness in this context for these reasons.

It should be noted that local ministries or government organisations likely have more information available to them than is publicly available. In the absence of successful appeals for information from government ministries, we are limited to information publicly available in online databases, therefore, we cannot guarantee that our analysis accounts for every intricacy of these countries' education systems. We recommend that future research in this area more closely partners with relevant government agencies to access this information and understand where it is stored.

This lack of information also limits our ability to generalise our findings beyond the countries we performed field research within.

Although our approach to participant selection was essential to our success, the risk of selection biases should be acknowledged. Using our local researchers and participants to iteratively change our participant list meant that we were able to identify the key organisations and stakeholders of relevance to our research in our focus countries. This was needed to navigate complex training systems with diverse stakeholder groups within them, however, this does mean that our results may have missed some perspectives or included too many from one group of stakeholders. To mitigate this, new stakeholders that were identified were assessed for relevance and significance to the research questions by the local and NZ research teams.

Further, given the inherent political nature of our report topic, participants may have incentives to give biased responses to our interview questions. To mitigate this, in our analysis we have assessed political, financial, and other perverse incentives that our stakeholders might have, and we have taken aggregate claims from our groups to form conclusions where possible.

The cultural relevance of the research tool may also have biased our results. The tool was reviewed by our local research teams, was translated into local languages where necessary, and was delivered in local languages where our researchers were able, however, the scale of this project did not allow us to pilot the tool or test different countries' understandings of the questions prior to implementation. To mitigate this, we designed the tool to receive information regarding common features of industry training systems, briefed the research teams in the concepts underpinning the tool, and allowed flexibility in the responses received.

With research teams in multiple countries, inter-interviewer reliability may also be a limitation. The research tool was semi-structured, but still allowed flexibility in responses. This flexibility presents reliability risks and may mean our inter-country comparisons are less valid. Researchers were thoroughly briefed regarding the concepts underpinning the research and the research's aims to mitigate this.

Another limitation is stakeholder participation. Whilst we sought wide perspectives, some countries' stakeholder groups were unable, or unwilling, to provide time for this voluntary research. Overall, participation was high and the needs driving the research were enough to motivate participants and create high levels of engagement. In some cases, though, external conditions such as public holidays and celebrations; business and organisational demands; and community circumstances reduced available time for participation. The closely connected communities in our focus countries meant that participants were more likely to be impacted by these external circumstances or to prioritise being involved with them, leading to reduced capacity for participation. The time requirement for participation may have been another barrier.

Appendix 16: Current Initiatives and Policies in place: Potential synergies

Work-based Learning (WBL) is at different stages of development throughout the Pacific. Pacific governments over the last few decades have begun to acknowledge the potential for WBL as a way to increase economic development so have invested in the sector. Due to the diverse circumstances of different countries within the Pacific, these investments look different country-to-country. Countries are also at different stages of developing their skills formation systems.

In our research, particularly in our field research, we identified some of the current initiatives that our focus countries are engaging in. Table 44 below describes some of these with a short summary of the current situation in the skills development system.

Importantly, there was a net strong support from all stakeholder groups in all focus countries to establish local construction industry training systems.

Table 44: Current direction for Work-Based Learning systems in our focus countries and notable developments.

COUNTRY	CURRENT WBL SYSTEM INITIATIVES AND DIRECTION
Cook Islands	• Government is developing an apprenticeship system with updates expected in 2022. Currently, hospitality apprentices have been trialling the initiative. • Government is developing a policy to ensure labour market responsiveness of tertiary education due in 2022.
Kiribati	• KIT plans to integrate their offerings further with the school system in Kiribati. • KIT is planning to offer higher level construction programmes, level 3, demanded by industry, though there are some challenges meeting the required standard to deliver these programmes. • Kiribati Facility in partnership with KIT is implementing part of the Australian governments TVET support programme. Australian government has provided significant support and empowerment to TVET in Kiribati and will continue this for at least the medium term, based on current arrangements (Skills for Employment programme).
Niue	• Government stakeholders reported that they were planning to extend the multi-skills certificate provided by Niue High School.
Solomon Islands	• Recent establishment of SITESA in 2019 has the system in a state of change. Some conflicting requirements between SITESA and the department of labour need to be addressed. • Government is working on a new NTTTC policy to better value non-formal learning and engage further with RTCs.
Tokelau	• This research identified no current skills development initiatives in place; there is no formal training system currently in Tokelau.
Tonga	• TNQAB is working to have the informal skills development sector better valued in the formal system.

COUNTRY	CURRENT WBL SYSTEM INITIATIVES AND DIRECTION
	• TNQAB are in the process of establishing sets of national competency-based qualifications in partnership with industry. Only a few have been developed so far, but processes are in place to develop more. • Recent announcements suggest the likely establishment of a national university which merges several government skills providers. • A review of the Tongan education system was budgeted for in the 2021/2022 budget.

Appendix 17: Classifications of Pacific Economies

The MIRAB model classifies Pacific economies into three different archetypes (Bertram, 2006):

- **MIRAB (Migration, Remittances, Aid and Bureaucracy):** Welfare and per capita incomes in these economies are driven by two relationships:
    - The stock of overseas-resident migrants and their descendants, which sustain the flow of remittances and new migrants; and
    - The stock of domestic public-sector employment, which is sustained by the flow of aid.
- **SITE (Small Island Tourist Economy):** In these countries, tourism is the main driver of economic activity.
- **PROFIT (People Considerations, Resource Management, Overseas Engagement, Finance, Insurance and Taxation, and Transport):** PROFIT economies seek to exploit a broader set of economic opportunities through:
    - Smart immigration and cyclical migration policy,
    - Engaging in tough external negotiations concerning the use of local mineral, natural, political and other imaginative resources,
    - Securing and controlling viable means of transportation; and
    - Luring foreign direct investment with very low/no taxes.

The Asian Development Bank also classifies Pacific Island developing states based upon economic structures and population size (Asian Development Bank, 2019).

- **Large resource exporters**
    - Countries such as Papua New Guinea and the Solomon Islands have large agricultural and mineral resources.
- **Tourism-based economies**
    - Countries such as the Cook Islands, Samoa, and Vanuatu have substantial national investment in Tourism.
- **Smaller Islands and Atolls**
    - Countries such as Kiribati, Tonga, Niue, and Tokelau have the narrowest resource bases and are more reliant on development assistance.