

Case for Endorsement

Information and
Communications Technology
Training Package Version 5.0

*Review of qualifications relating to
telecommunications technology that may
not be fit for purpose*

PwC's Skills for Australia

Project 1F

March 2019

1 *Executive summary*

Introduction

This Case for Endorsement outlines the rationale, evidence and industry support for modifications to telecommunications technology qualifications in the ICT *Information and Communications Technology Training Package* that may not be fit for purpose. It articulates the issues associated with the qualifications within the scope of the review, including learner outcomes not being to industry standard, structural industry changes not being represented, and there being duplication of units and overlap of qualifications.

In particular the outcomes of this project, addressing the COAG principles for Training Package development, include:

- Modifying core units across Certificate II to Certificate IV qualifications;
- Streamlining Certificate III qualifications – specifically, deleting ICT30215 *Certificate III in Telecommunications Digital Reception Technology* and ICT30315 *Certificate III in Telecommunications Rigging Installation* and incorporating relevant units as specialist elective streams within ICT30515 *Certificate III in Telecommunications Technology* (recoded to ICT30519);
- Modifying select units to ensure industry relevance; and
- Creating new units to meet industry needs.

The IRC is satisfied that the level and scope of stakeholder consultation was commensurate with the changes to training product and the size and profile of the industry, to ensure the needs of learners, industry and workers within the Telecommunications sector of the ICT industry are met.

Structure of the report

This report has been developed as part of training product development work undertaken on behalf of, and directed by, the Information and Communications Technology Industry Reference Committee (IRC).

We have structured this report around the following required elements of the Case for Endorsement template.

- 1 Administrative details of the Case for Endorsement
- 2 Description of the work and request for approval
- 3 Evidence of industry support
- 4 Industry expectations about training delivery
- 5 Implementation of the new Training Packages
- 6 Quality assurance reports
- 7 Implementation of the COAG Industry Skills Council reforms to Training Packages
- 8 A copy of the full content of the proposed Training Package components

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2 Administrative details

Name of allocated IRC

Information and Communications Technology Industry Reference Committee

Name of SSO

PwC's Skills for Australia

Training Package components submitted for approval

See Tables 1 and 2 below

Table 1 Summary of total number of proposed endorsable changes

Training package component	Number of training products
Existing qualifications to be amended	6
Qualifications to be deleted	2
Existing units to be amended	42
Units to be deleted	2
New units to be created	13

Table 2 Training Package components submitted for AISC approval

Previous code	Previous training product title	New code	New training product title	Status	Equivalence
Qualifications					
ICT20215	Certificate II in Telecommunications Network Build and Operate	ICT20219	Certificate II in Telecommunications Network Build and Operation	Existing	Non-equivalent qualification
ICT20315	Certificate II in Telecommunications Technology	ICT20319	Certificate II in Telecommunications Technology	Existing	Non-equivalent qualification
ICT30215	Certificate III in Telecommunications Digital Reception Technology	N/A	N/A	Deleted	N/A
ICT30315	Certificate III in Telecommunications Rigging Installation	N/A	N/A	Deleted	N/A
ICT30415	Certificate III in Telecommunications Network Build and Operate	ICT30419	Certificate III in Telecommunications Network Build and Operation	Existing	Non-equivalent qualification
ICT30515	Certificate III in Telecommunications Technology	ICT30519	Certificate III in Telecommunications Technology	Existing	Non-equivalent qualification

Previous code	Previous training product title	New code	New training product title	Status	Equivalence
ICT41115	Certificate IV in Telecommunications Network Design	ICT41119	Certificate IV in Telecommunications Network Design	Existing	Non-equivalent qualification
ICT41215	Certificate IV in Telecommunications Engineering Technology	ICT41219	Certificate IV in Telecommunications Engineering Technology	Existing	Non-equivalent qualification
Units of Competency					
ICTBWN301	Perform tests on optical communication system and components	ICTBWN309	Perform tests on optical communication system and components	Existing	Non-equivalent unit
ICTBWN304	Work safely with live fibre to test and commission a fibre to the x installation	ICTBWN308	Work safely on live optical fibre installations	Existing	Non-equivalent unit
N/A	N/A	ICTBWN306	Use radio frequency measuring instruments	New	N/A
N/A	N/A	ICTBWN307	Use optical measuring instruments	New	N/A
ICTCBL201	Install customer cable support systems	ICTCBL239	Install customer cable support systems	Existing	Equivalent unit
ICTCBL202	Place and secure customer cable	ICTCBL240	Place and secure customer cable	Existing	Equivalent unit
ICTCBL203	Terminate metallic conductor customer cable	ICTCBL241	Terminate metallic conductor customer cable	Existing	Equivalent unit
ICTCBL204	Install functional and protective telecommunications earthing system	ICTCBL242	Install functional and protective telecommunications earthing system	Existing	Equivalent unit
ICTCBL207	Haul underground cable	ICTCBL249	Haul underground cable for installation and maintenance work	Existing	Non-equivalent unit
ICTCBL208	Splice and terminate optical fibre cable for carriers and service providers	ICTCBL330	Splice and terminate optical fibre cable for telecommunications projects	Existing	Non-equivalent Unit
ICTCBL209	Joint and terminate coaxial cable	ICTCBL252	Joint and terminate coaxial cable	Existing	Equivalent unit
ICTCBL213	Construct underground telecommunications infrastructure	ICTCBL253	Construct underground telecommunications infrastructure	Existing	Equivalent unit

Previous code	Previous training product title	New code	New training product title	Status	Equivalence
ICTCBL214	Fix aerial cable	ICTCBL250	Haul and fix aerial cable	Existing	Non-equivalent unit
ICTCBL215	Joint metallic conductor cable in access network	ICTCBL254	Joint metallic conductor cable in access network	Existing	Equivalent unit
ICTCBL220	Install a cable lead-in	ICTCBL251	Install aerial and underground cable lead-ins	Existing	Non-equivalent unit
ICTCBL236	Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule	ICTCBL246	Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule	Existing	Equivalent unit
ICTCBL237	Install, maintain and modify customer premises communications cabling: ACMA Open Rule	ICTCBL247	Install, maintain and modify customer premises communications cabling: ACMA Open Rule	Existing	Equivalent unit
N/A	N/A	ICTCBL248	Install and terminate hard-line coaxial cable	New	N/A
ICTCBL302	Install and terminate optical fibre cable on customer premises	ICTCBL322	Install, test and terminate optical fibre cable on customer premises	Existing	Non-equivalent unit
ICTCBL304	Perform cable and system test on customer premises	ICTCBL323	Test cables and systems on customer premises	Existing	Non-equivalent unit
ICTCBL307	Install underground enclosures and conduit	ICTCBL334	Install underground enclosures and conduit	Existing	Equivalent unit
ICTCBL308	Install underground cable	ICTCBL329	Install underground cable for communications applications	Existing	Non-equivalent unit
ICTCBL309	Construct aerial cable supports	ICTCBL335	Construct aerial cable supports	Existing	Equivalent unit
ICTCBL310	Install aerial cable	ICTCBL333	Install aerial cable for communications applications	Existing	Non-equivalent unit
ICTCBL312	Cutover new systems and equipment on customer premises	ICTCBL324	Cut over new systems and equipment on customer premises	Existing	Equivalent unit

Previous code	Previous training product title	New code	New training product title	Status	Equivalence
ICTCBL315	Maintain cable network	ICTCBL325	Maintain cable network	Existing	Equivalent unit
ICTCBL317	Cut over metallic conductor cable in the access network	ICTCBL326	Cut over metallic conductor cable in the access network	Existing	Equivalent unit
N/A	N/A	ICTCBL331	Conduct basic identification and fault-finding within cabling networks and customer equipment	New	N/A
ICTCBL318	Install and cut over metallic conductor cable to access network cabinet	ICTCBL336	Install and cut over metallic conductor cable to access network cabinet	Existing	Equivalent unit
N/A	N/A	ICTCBL332	Locate, identify and rectify copper cable faults	New	N/A
ICTCMP202	Perform restricted customer premises broadband cabling work: ACMA Restricted Rule	ICTCMP203	Perform restricted customer premises broadband cabling work: ACMA Restricted Rule	Existing	Equivalent unit
ICTDRE304	Design communications wiring systems for customer premises	ICTDRE314	Design communications wiring systems for customer premises	Existing	Equivalent unit
N/A	N/A	ICTDRE308	Install a cable broadband multi-dwelling unit system	New	N/A
ICTOPN401	Install and test a dense wavelength division multiplexing system	ICTOPN405	Install and test a dense wavelength division multiplexing system	Existing	Equivalent unit
ICTOPN402	Use advanced optical test equipment	ICTOPN404	Test optical communications systems and components	Existing	Non-equivalent unit
ICTRFN401	Conduct radio frequency measurements	ICTRFN407	Conduct radio frequency measurements	Existing	Equivalent unit
ICTTEN201	Use electrical skills in telecommunications work	ICTTEN208	Use electrical skills when working with telecommunications networks	Existing	Non-equivalent unit
N/A	N/A	ICTTEN210	Install underground telecommunications infrastructure	New	N/A

Previous code	Previous training product title	New code	New training product title	Status	Equivalence
N/A	N/A	ICTTEN211	Work effectively in a telecommunications network environment	New	N/A
ICTTEN302	Install telecommunications network equipment	ICTTEN312	Install telecommunications network equipment	Existing	Equivalent unit
ICTTEN303	Locate, identify and rectify recurrent network faults	ICTTEN313	Work on and resolve recurrent network faults	Existing	Equivalent unit
ICTTEN304	Recover customer premises equipment	ICTTEN319	Recover customer premises equipment	Existing	Equivalent unit
ICTTEN306	Commission an electronic unit	ICTTEN320	Commission an electronic unit	Existing	Equivalent unit
ICTTEN308	Maintain an electronic system	ICTTEN321	Maintain an electronic system	Existing	Equivalent unit
ICTTEN309	Provide infrastructure for telecommunications network customer equipment	ICTTEN322	Provide infrastructure for telecommunications network customer equipment	Existing	Equivalent unit
N/A	N/A	ICTTEN315	Determine and apply technologies within a telecommunications system	New	N/A
N/A	N/A	ICTTEN316	Conduct basic tests and analyses of telecommunications copper cabling	New	N/A
N/A	N/A	ICTTEN317	Locate, identify and rectify telecommunications network faults	New	N/A
ICTTEN311	Inspect, clean and handle optical fibre cable and connectors	ICTTEN318	Inspect, clean and handle optical fibre cable and connectors	Existing	Non-equivalent unit
ICTTEN401	Identify requirements for customer telecommunications equipment	ICTTEN432	Identify requirements for customer telecommunications equipment	Existing	Equivalent unit
ICTTEN405	Install configuration programs on PC based customer equipment	ICTTEN433	Install configuration programs on PC based customer equipment	Existing	Equivalent unit

Previous code	Previous training product title	New code	New training product title	Status	Equivalence
N/A	N/A	ICTTEN435	Solve electrical-based telecommunications circuitry and cabling problems	New	N/A
ICTWHS203	Work safely near power infrastructure	ICTWHS205	Work safely near power infrastructure at a telecommunications workplace	Existing	Non-equivalent unit
ICTWOR201	Work effectively in a digital or telecommunications industry	ICTWOR202	Work effectively in the digital and telecommunications industry	Existing	Non-equivalent unit
N/A	N/A	ICTWOR308	Provide customer service to telecommunications customers	New	N/A
ICTBWN305	Use optical and radio frequency measuring instruments	N/A	N/A	Deleted	N/A
ICTTEN305	Refurbish customer premises equipment	N/A	N/A	Deleted	N/A

These Table 2 components have been independently verified as meeting the requirements of the *Standards for Training Packages*, and reviewed and approved by the ICT IRC.

Case for Change details

A Case for Change – previously referred to as a *Business Case* – was submitted on behalf of the previous ICT IRC, in November 2016. As outlined in that document, this project was established based on the initial research and consultations with industry and interested stakeholders carried out for the Industry Skills Forecast and Proposed Schedule of Work (previously referred to as a *Four Year Work Plan*) indicating that there are telecommunication technology qualifications which are not fit for purpose.

Activity order details

Reference number: PwC/TPD/2016-17-004

Date executed: 22 December 2016

Scope of activity order: A review of 86 (73 existing; 13 new) native ICT units of competency. The activity order referred to both Projects 1E and 1F, this Case for Endorsement concerns itself with only Project 1F (the remaining 41 existing units of competency and 13 new units).

3 *Description of work and request for approval*

The Case for Change for Project 1F was endorsed by the ICT IRC and submitted to the Australian Industry and Skills Committee (AISC). The AISC endorsed the Case for Change on 17 November 2016.

The telecommunications industry is experiencing many changes due to technological evolution and the workforce shifting from primarily salaried workers to a wider use of contracting services. The pool of experienced workers has been significantly reduced and has resulted in training package components needing to be modified to facilitate training delivery that meets immediate industry skill gaps. These trends are amplified by the workforce needs of the multi-technology National Broadband Network (NBN) rollout, which include a wider range of skill sets and more focused qualifications. The telecommunications industry wants to ensure that entrants into the industry are appropriately trained.

3.1 *Views from consultation*

Industry has strongly supported the current review and changes to the qualifications, skill sets and units of competency that facilitate the delivery of modern telecommunication services. Through conducting industry consultations, concerns were identified with certain qualifications and units that indicated industry requirements were not being satisfied by the current training package. The consultations and findings for the proposed recommended changes, detailed in **Appendix B**, are represented in the following 4 themes:

- Modifying core units across Certificate II to Certificate IV qualifications;
- Streamlining Certificate III qualifications;
- Introducing entry requirements into Certificate IV qualifications; and
- Reviewing the electives for relevance.

Detailed information on the feedback received in consultation, and changes made due to this feedback, are included in **Appendix B**.

3.2 *Request for approval from AISC*

This submission puts forward the Case for Endorsement for the proposed components of the *Information and Communications Technology Training Package Version 5.0*.

The training package components submitted to the AISC for endorsement are:

- 6 currently endorsed qualifications that were reviewed and amended
- 55 units of competency consisting of:
 - 13 new units of competency developed during this project; and
 - 42 currently endorsed units of competency that were reviewed and amended.

All Training Package components submitted for approval for implementation have been developed and reviewed in accordance with the *Standards for Training Packages 2012*, the *Training Package Products Policy 2012*, and the *Training Package Development and Endorsement Process Policy 2016*.

Evidence of consultation with States and Territories, and evidence that the views of key stakeholders have been considered is provided in Section 4 of this document.

This Case for Endorsement is approved by the ICT IRC, as per Section 3 of this document. It is therefore submitted, through the Department of Education and Training, for AISC consideration. It is based on analysis of consultation feedback with industry employers and other industry stakeholders.

Table 3 Summary of changes made to each qualification

ICT20219 Certificate II in Telecommunications Network Build and Operation

Remove CPCCOHS1001A Work safely in the construction industry from core

Create ICTCBL248 Install and terminate hard-line coaxial cable

Create ICTTEN210 Install underground telecommunications infrastructure

Create ICTTEN211 Work effectively in a telecommunications network environment

Modify 2 core units

Remove 2 units from the elective bank and introduce 4 units

ICT20319 Certificate II in Telecommunications Technology

Amend packaging rules

Modify 2 core units and remove 1 unit from the core

Move 5 units from Group A Radio communications and rigging to new elective Group D Rigging units

Create Group C Radio communications to include 3 units

ICT30215 Certificate III in Telecommunications Digital Reception Technology

Delete ICT30215 Certificate III in Telecommunications Digital Reception Technology from the Training Package

ICT30315 Certificate III in Telecommunications Rigging Installation

Delete ICT30315 Certificate III in Telecommunications Rigging Installation from the Training Package

ICT30419 Certificate III in Telecommunications Network Build and Operation

Modify 3 core units and remove 2 units from the core

Create ICTBWN306 Use radio frequency measuring instruments

Create ICTBWN307 Use optical measuring instruments

Create ICTCBL332 Locate, identify and rectify copper cable faults

Create ICTDRE308 Install a cable broadband multi-dwelling unit system

Create ICTTEN315 Determine and apply technologies within a telecommunications system

Create ICTTEN317 Locate, identify and rectify telecommunications network faults

Create ICTWOR308 Provide customer service to telecommunications customers

Modify elective banks to include 18 units and remove 1 unit

Amend packaging rules

ICT30519 Certificate III in Telecommunications Technology

Modify 3 core units and remove 4 units from the core

Create ICTCBL331 Conduct basic identification and fault-finding within cabling networks and customer equipment

Create ICTTEN316 Conduct basic tests and analyses of telecommunications copper cabling

Create Group J Telecommunications Rigging specialist elective group comprised of 3 units

Introduce 26 units into elective banks and remove 12 units

Amend packaging rules

Introduce four bracketed specialisations

ICT41119 Certificate IV in Telecommunications Network Design

Introduce new entry requirements (see Section 2.1.3)

Remove 2 units from the core

Create ICTTEN435 Solve electrical-based telecommunications circuitry and cabling problems

Introduce 9 units to elective banks and remove 1 unit

Amend packaging rules

ICT41219 Certificate IV in Telecommunications Engineering Technology

Introduce new entry requirements (see Section 2.1.3)

Modify 2 core units and remove 6 units from the core

Introduce bracketed specialisation

Introduce 9 units into elective banks and remove 4 units

Amend packaging rules

Delete 2 units of competency from the training package

4 *Evidence of industry support*

The Information and Communications Technology Industry Reference Committee supports the submission of the training package components detailed in this Case for Endorsement.

Name of Chair: James Wyatt, ICT IRC Chair, Optimi Digital

Signature of Chair:

Date:

4.1 *Conduct of enquiry*

Throughout consultation, PwC's Skills for Australia has placed industry at the heart of this project's objectives to ensure that the outcomes of the review are closely aligned to the broader goals of the ICT industry. Our approach has been guided by our principles for training product development, which determine that our work should:

1. Be industry-led;
2. Encourage broad and transparent stakeholder consultation;
3. Respond quickly to industry skills needs and priorities;
4. Be efficient and cost-effective; and
5. Produce high quality and independently validated training products.

We have consulted with industry and other relevant stakeholders through the methods outlined below. A list of stakeholders consulted over the course of project work is found in **Appendix A**.

In total we have consulted in excess of 177 individuals. Throughout the review we have held consultations with key stakeholders who were identified by ICT IRC members or Project Working Group (PWG) members, and PwC's Skills for Australia networks.

Project Working Group

A PWG was established and consisted of industry and registered training organisation (RTO) experts who guided the training product development process and ensured that industry skill needs and priorities were identified and met. An ICT IRC member was also appointed as a dedicated project sponsor and ensured that project work proceeded under the direction of the ICT IRC. The PWG held 10 meetings over the period of April 2017 – June 2018 to discuss key issues regarding the qualifications and units within the scope of this body of work. PWG members were consulted through emails and teleconferences on an ongoing basis to validate key issues and review key documents.

PWG members also conducted internal meetings with their subject matter experts both from the carrier network and customer premises sectors who contributed to the technical expert advice in developing the training package components.

Appendix A Table ii includes a list of Project Working Group members.

Workshops

Workshops were open to the public on this material. These workshops explored key questions relating to required changes to the units of competency and qualifications in scope. Concurrent to face-to-face workshops in Victoria, New South Wales and Queensland, comment and feedback was sought on the same material from all States and Territories and those on the Skills for Australia national stakeholder register.

Table 4 below provides a list of the locations and attendance numbers for the workshops undertaken.

Table 4 Workshop attendance

Location	Date	Number of Participants
Sydney	17/05/2018	12
Brisbane	18/05/2018	10
Melbourne	21/05/2018	9

Targeted consultation

Throughout the project, there has been ongoing consultation with stakeholders identified to be relevant to the project. Stakeholders have been identified through ICT IRC members, Communications and Information Technology Training (CITT) training product development contractors, PWG members as well as through PwC's Skills for Australia networks.

The consultative approach was national, inclusive and invited responses from a range of stakeholders including industry employers and organisations, peak industry bodies, enterprise industry associations, and various departmental personnel including peak associations, government, RTOs, and state and territory training authorities (STAs). Consultations were generally held through face-to-face workshops, one-on-one interviews, as well as through written emails.

Appendix A Table iii lists the personnel who provided feedback through emails, workshops, interviews and the online processes.

Engagement with State and Territory Training Authorities

STAs have been formally engaged throughout the review process. STAs provided feedback during development of the Case for Change, the Case for Endorsement's consultation phase through targeted consultations, during the validation phase, and following the finalisation of the quality, equity, and editorial reports.

Validation process

Training products were updated to reflect comments received via an issues register developed at the start of Project 1F and consistently updated.

Updated draft training products were then published on the PwC Skills for Australia website from early May to 1st June 2018 to ensure stakeholders had sufficient time for review and to comment on the ways feedback and industry drivers had been reflected in the proposed draft material. This page was reviewed 119 times and downloaded 315 times over the course of this time. Emails were also sent to 963 subscribers alerting stakeholders that the draft training products were available for review on the PwC's Skills for Australia website.

Validation was carried out in three phases for Project 1F: the initial public validation of draft training products, the subsequent validation through Quality Assurance processes and STA review, and the final validation by the IRC. This process ensured that the training package components reflect the requirements of industry, are compliant with the training package standards, and are acceptable to stakeholders.

4.2 Dissenting views expressed during consultation

No systemic barriers to the development of these training products have been identified. Employers, industry stakeholders, STAs, VET regulators, and RTO stakeholders have been consulted and kept informed of changes during the review and redevelopment process.

Throughout consultations, some stakeholders raised concerns on changes that had been introduced into the qualifications and units of competency. Significant concerns were considered by the PWG and

IRC members, and decisions and actions were taken that provided more viable options as in Table 6.

Table 5 Summary of dissenting views throughout consultations

Changes proposed	Dissenting view	Action taken
Introduction of entry requirements into Certificate IV qualifications	The telecommunications industry had requested the introduction of entry requirements to strengthen the qualification and provide appropriately trained technicians to meet industry demand. Some feedback indicated that the requirements did not provide for relevant industry workers that only had carrier or customer premises experience with an ACMA Open Registration.	After careful consideration by the PWG and IRC, entry requirements were made more flexible by inclusion of an additional category that met industry requirements.
'Prior training experience statements' to be included in some technical units of competency	Industry expressed concern over learners needing to have training experience prior to undertaking some technical units of competency. A majority of industry stakeholders disagreed with this, and agreed it should be removed.	After careful consideration, the training experience paragraph was removed from the Application of the relevant technical units and a broad statement relating to clustering identified technical units for training delivery included instead in the Implementation Guide.
Inclusion of prerequisites to units of competency	Industry requested that current higher-level units of competency have prerequisites introduced to strengthen the vocational outcomes of those units.	This change was not implemented in the interests of securing the best skill outcomes for industry.
To review all qualifications within the ICT Telecommunications Stream	Industry requested a review of Diploma qualifications in line with innovations and convergence within the ICT industry.	This request is outside scope of this project. It has been noted for consideration in future scoping of required ICT work.
To review the Cyber Security requirements within this Training Package	Industry requested to consider the various State based qualifications to be incorporated into this Training Package.	This request is outside scope of this project, but is however being currently reviewed as part of an ICT project underway.
Explore the ACMA Radio Communications Standards and relationship to underpinning units of competency	ACMA requested that this project consider a review of the Radio Communications units of competency in line with Standards.	Preliminary work undertaken and scope of work identified It has been noted for consideration in future scoping of required ICT work.

Deletion of two units of competency from the National Register

Based on industry consultation, we propose to delete two units from the National Register. These units are listed below.

ICTBWN305	Use optical and radio frequency measuring instruments	Deleted
ICTTEN305	Refurbish customer premises equipment	Deleted

These units are proposed for deletion as considered not fit for industry purpose.

Stakeholder support for the deletion of unit of competency ICTTEN305 *Refurbish customer premises equipment* from the National Register is strong, and has been consistently expressed throughout consultations due to its now obsolete outcome.

Stakeholder support for the deletion of unit of competency ICTBWN305 *Use optical and radio frequency measuring instruments* from the National Register is strong, and has been consistently expressed throughout consultations. Due to the changing nature of equipment and vocational outcomes the current ICTBWN305 has been separated into a new (ICTBWN306 *Use radio frequency measuring instruments*) and an updated unit (ICTBWN307 *Use optical measuring instruments*) to meet the required vocational outcomes.

We have been made aware of no negative implications, including downstream impacts, of deleting these units. We are not aware of any impacts on funding arrangements from their deletion.

The optimal time to delete these units will be following the AISC's endorsement of this Case for Endorsement and the subsequent publication of Release 5.0 of the ICT Training Package on the National Register.

Introduction of entry requirements into Certificate IV qualifications

Based on industry consultation and requirements expressed therein, we propose to introduce entry requirements to two Certificate IV qualifications within the ICT Training Package. These qualifications and their entry requirements are detailed below.

Table 6 Summary of entry requirements added to Certificate IV qualifications in scope

<p>ICT41119 Certificate IV in Telecommunications Network Design</p>	<p>Entry to this qualification is limited to those individuals who:</p> <ul style="list-style-type: none"> • a Certificate II or III in Telecommunications from the ICT Information and Communications Technology Training Package or the ICT10 Integrated Telecommunications Training Package and certified evidence of at least 700 hours of work experience within the related scope of this qualification, which may have occurred concurrent with or after the qualification was achieved <p>or</p> <ul style="list-style-type: none"> • a Certificate II or III in Electrotechnology from the UEE Electrotechnology Training Package and certified evidence of at least 700 hours of work experience within the related scope of this qualification, which may have occurred concurrent with or after the qualification was achieved <p>or</p> <ul style="list-style-type: none"> • a current unrestricted electrical licence from any Australian state or territory electrical regulator <p>or</p> <ul style="list-style-type: none"> • a Certificate II or III in Telecommunications from the ICT Information and Communications Technology Training Package or the ICT10 Integrated Telecommunications Training Package and enrolment in this Certificate IV as part of a traineeship or apprenticeship program or concurrently employed within the ICT Industry <p>or</p> <ul style="list-style-type: none"> • open registration as an ACMA registered cabler with certified evidence of at least 2100 hours of work experience within customer premises doing cabling or telecommunications carrier work.
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Entry to this qualification is limited to those individuals who:

- a Certificate II or III in Telecommunications from the ICT Information and Communications Technology Training Package or the ICT10 Integrated Telecommunications Training Package and certified evidence of at least 700 hours of work experience within the related scope of the qualification, which may have occurred concurrent with or after the qualification was achieved
 - or
 - a Certificate II or III in Electrotechnology from the UEE Electrotechnology Training Package and certified evidence of at least 700 hours of work experience within the related scope of the qualification, which may have occurred concurrent with or after the qualification was achieved
 - or
 - a current unrestricted electrical licence from any Australian State or Territory electrical regulator
 - or
 - a Certificate II or III in Telecommunications from the ICT Information and Communications Technology Training Package and enrolment in the ICT41219 Certificate IV in Telecommunications Engineering Technology as part of a traineeship or apprenticeship program or concurrently employed within the ICT Industry
 - or
 - open registration as an ACMA registered cabler with certified evidence of at least 2100 hours of work experience within the customer premises doing cabling or telecommunications carrier work.
- ICT41219 Certificate IV
in Telecommunications
Engineering Technology
-

The proposal to introduce entry requirements is justified by an industry-provided, evidence-based rationale, outlining the reason for such entry requirements to be included in Release 5.0 of the ICT Training Package. The rationale, found below, has been reviewed and endorsed by the IRC.

Stakeholder support for the introduction of entry requirements to qualifications ICT41119 *Certificate IV in Telecommunications Network Design* and ICT41219 *Certificate IV in Telecommunications Engineering Technology* is strong and has been consistently expressed throughout consultations, with consultations regarding these arrangements. These suggestions were confirmed and endorsed by the PWG. Given the importance of the National Broadband Network and other broadband networks to the robustness of Australia's economy and the wellbeing of our citizens, it is imperative to have well trained trades people and para-professionals working on these networks. Industry supports the introduction of entry requirements to ensure technicians that are entrusted with installing and servicing the highly complex and vulnerable Broadband Network are appropriately trained to undertake the work in a safe and experienced manner. Industry acknowledged the necessity for the requirements to be flexible, hence the introduction of various pathways within the entry requirements for both Certificate IV qualifications.

Given the complexity of both qualifications categorised at AQF level 4, industry asserted that neither are suitable for entry level training. To allow students to enter these qualifications without demonstrating underpinning telecommunications knowledge and skills gained through either training or sufficient work place experience, would contribute to poor student retention and competency outcomes. Furthermore, adherence to strict work health and safety (WHS) requirements for the safety of the workforce and the general public, is vital in both qualifications. Allowing students to enter these qualifications without a foundational understanding of working safely within the telecommunication industry has the potential to put students and the public at risk.

We have not been made aware of any negative implications, including downstream impacts, of introducing these entry requirements, as is the same to impacts on funding arrangements due to their introduction.

The optimal time to introduce these entry requirements will be following the AISC's endorsement of this Case for Endorsement and the subsequent publication of Version 5.0 of the ICT Training Package on the National Register.

5 *Industry expectations about training delivery*

5.1 *Expectations*

Throughout consultation it was evident that industry expected structural changes to the ICT Training Package to be made to ensure that the qualifications can continue to be successfully delivered.

Industry has indicated consistently throughout the consultation process that employers view the Certificate III information technology qualifications as entry level to getting a job, which serves the purpose of providing foundational skills for new entrants into the industry. Industry has additionally indicated throughout consultation that their requirements align with individuals having a broad set of foundational skills, while also being able to focus on a specific area of expertise. New units of competency addressing telecommunications principles and customer service have been introduced with greater flexibility of choice in specialisation electives.

Industry expects that the duration of training would be sufficient to meet competency requirements of units but did not seek to specify the minimum or maximum requirements. Industry also advised that training should be assessed in a workplace or a simulated environment typical of an ICT workplace, with further detail provided in the Companion Volume Implementation Guide for support.

Further, the ICT Training Package Companion Volume Implementation Guide (CVIG) suggests ICT20319 *Certificate II in Telecommunications Technology* as suitable for delivery through the VET for Secondary Students framework (except where the Rigging stream is not applicable to secondary students). Industry has also indicated as part of the consultation process that the ICT30519 *Certificate III in Telecommunications Technology* offers several pathways for individuals undertaking the qualification.

5.2 *Impact on traineeships*

The ICT Industry Reference Committee is aware that these changes will impact current traineeships resulting from the changes to training products proposed in this Case for Endorsement.

Current traineeships will need to provide transition arrangements for completion of various qualifications within the system.

The proposed changes to the Training Package may encourage a greater uptake of traineeships, due to the streamlining of ICT30519 *Certificate III in Telecommunications Technology*, the deletion of ICT30215 *Certificate III in Telecommunications Digital Reception Technology* and ICT30315 *Certificate III in Telecommunications Rigging Installation*, and the review of core and elective units.

6 *Implementation of the new Training Package*

Licensing requirements

All customer cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an ACMA-accredited registrar. The current training product changes do not, however, affect the licensing requirements in and of themselves.

Telecommunication units that are subject to ACMA requirements are specified within the Implementation Guide. Within the unit application of those units, reference is made to the ACMA requirements and the need to be registered to undertake such work.

ACMA has been engaged throughout the change process and has been interested to gain industry feedback to ensure that the pathway units remain fit for purpose and ensure the safety and integrity of the customer premises network and its cablers.

A change to the unit of competency *ICTCBL247 Install, maintain and modify customer premises communications cabling: ACMA Open Rule* will result in a more streamlined pathway for learners to achieve vocational outcomes towards applying for an open registration within the ACMA Pathways.

Implementation management strategy

The communication of these changes to the ICT Training Package will require RTOs to potentially respond with modifications to qualification offerings and scope.

In the event of AISC approval of this draft ICT material, the strategy for communicating these changes includes:

- Communications to all RTOs that have a qualification or skill set on scope which will be affected by changes made within this project.
- Updates on PwC's Skills for Australia website; including news post on our ICT page.
- Email sent directly to all PwC's Skills for Australia ICT subscribers to inform them of the changes.
- Email communications with all organisations and individuals previously engaged throughout this consultation process, including employers, RTOs, and peak bodies.
- Development of a summary document providing an explanation of the changes included as Version 5. This document will be shared with all networks and broader distribution will be encouraged.
- PwC's Skills for Australia team to be present at relevant industry conferences and events to communicate the changes and encourage industry-wide awareness.

7 *Quality assurance reports*

7.1 *Independent Quality Reports*

Independent Quality Reports, including an Editorial Report, an Equity Report, and a Quality Report have been included as part of this Case for Endorsement.

The reports attest to the draft material meeting the Standards and their associated policy requirements, and to there being a quality-assured Companion Volume Implementation Guide prepared. PwC's Skills for Australia confirms that this Guide will be available on VETNet following publication of Version 5.0 of the ICT Training Package on the National Register.

Equity Report

Two equity reports are submitted in this Case for Endorsement. Both reports were completed by Quality Assurance panellists, and together attest that the material submitted in this Case for Endorsement meet equity compliance requirements. The first report (Sally Tansley, 4 September 2018) detailed the outcomes of an initial equity review which identified some areas of non-compliance. The second report an addendum, confirming that as a result of the further development work undertaken to address identified areas of non-compliance the revised material is now deemed compliant from an equity perspective (Kerry Jennings, 27 November 2018). The two reports are found in **Appendix D**.

Editorial Report

Two editorial reports are submitted in this Case for Endorsement. Both reports were completed by Quality Assurance panellists, and together attest that the material submitted in this Case for Endorsement meet editorial compliance requirements. The first report (Sally Tansley, 16 July 2018) detailed the outcomes of an initial editorial review which identified some areas of non-compliance. The second report an addendum, confirming that as a result of the further work undertaken to address identified non-compliance, the material is now deemed compliant from an editorial perspective (Kerry Jennings, 27 November 2018). The two reports are found in **Appendix D**.

Quality Report

The quality report was completed on 31st December 2018 by Quality Assurance panellist Bernadette Delaney. The report can be viewed in **Appendix D**.

7.2 *Declaration of alignment with standards*

Throughout consultation, we have sought to place the needs of industry at the heart of our review. We have also ensured that the proposed Training Package components we have developed as a result of our consultation with industry meet the requirements of:

- The Standards for Training Packages 2012
- Training Package Products Policy
- Training Package Development and Endorsement Process Policy.

7.3 *Confirmation the Implementation Guide is available and quality assured*

Independent Quality Reports, including an Editorial Report, an Equity Report, and a Quality Report included the review of the ICT Companion Volume Implementation Guide, updated to reflect Version 5.0 changes. This Implementation Guide is readily available on VETNet.

7.4 Declaration of having met the Training Package quality principles

Quality Principle	Evidence of Consideration
<p>1. Reflect identified workforce outcomes.</p>	<ul style="list-style-type: none"> • Wide reaching consultation with industry and relevant state and territory stakeholders has been undertaken to ascertain the skills requirements of individuals wishing to work in telecommunication related occupations. • Through targeted consultation, focus groups, and the use of the PWG and the ICT IRC and its network desired workforce outcomes have been identified which have been reflected in the construction of the training products. • The conduct of our enquiry, as outlined in Section 3.1 of this report, has ensured that industry needs have been at the heart of our training product development work. • Existing Training Package components have been amended to ensure currency with current technology and processes. • Training package components have been developed with reference to the key trends identified in the ICT Industry Skills Forecast and Proposed Schedule of Work.
<p>2. Support national (and international) portability of skills and competencies including reflecting licensing and regulatory requirements.</p>	<ul style="list-style-type: none"> • Training package components have been developed to be industry agnostic where appropriate. • Where possible we have modified skill sets and qualifications in order to support the transferability and portability of skills. Qualifications' packaging rules are sufficiently flexible as to allow the importation of units of competency from other Training Packages, or units of competency from other qualifications within the ICT Training Package. • Portability of skills and units were considered in light of ACMA approved regulatory requirements for cabler registrations.
<p>3. Reflect national agreement about the core transferable skills and core job-specific skills required for job roles as identified by industry.</p>	<ul style="list-style-type: none"> • Our consultations have included stakeholders from national and multi-national employers, peak bodies, national RTOs and other subject matter experts, ensuring that the national and international portability of skills has been inherent in our proposed modifications to Training Package components.
<p>4. Be flexible enough to meet the diversity of individual and employer needs, including the capacity to adapt to changing job roles and workplaces.</p>	<ul style="list-style-type: none"> • Units have been amended to ensure alignment with industry needs and workforce skill requirements. • Qualifications have been updated to ensure appropriate and varied elective unit choices are available.
<p>5. Facilitate recognition of an individual's skills and competencies and support movement between the school,</p>	<ul style="list-style-type: none"> • Skill sets and qualifications have been modified to provide learners with pathways from school into VET, between VET qualifications and into networking and cabling jobs.

Quality Principle	Evidence of Consideration
<p>vocational education and higher education sectors.</p>	<ul style="list-style-type: none"> • This Training Package has specialist skills that require equipment and resources that would require schools to partner with an RTO if they wish to deliver qualifications and/or skill sets.
<p>6. Support interpretation by training providers and others through the use of simple, concise language and clear articulation of assessment requirements.</p>	<ul style="list-style-type: none"> • The content of units of competency has been developed in consultation with industry and trainers and assessors, ensuring that language used is relevant to workplaces and is easily understood in a training context. • A Companion Volume Implementation Guide Version 5.0 will accompany Version 5.0 of the ICT Training Package helping to support implementation of training across a range of settings. • Assessment requirements in units of competency have been written to ensure consistency.

8 Implementation of the COAG Industry Skills Council reforms to Training Packages

8.1 Alignment with the COAG ISC reforms to Training Packages

Table 7 below demonstrates the alignment of the draft Training Package components with the COAG Industry Skills Council reforms to Training Packages.

Table 7 Considerations to COAG ISC reform principles

COAG Industry and Skills Council principles	Consideration
1. Ensure obsolete and superfluous qualifications are removed from the system	<p>As outlined in Section 3.2 changes have been made to the Training Package guided by consultation which have resulted in the deletion of two units of competency and two qualifications from the ICT Training Package which were identified as being obsolete or otherwise not fit for purpose.</p> <p>54 units of competency have been amended to ensure that the units are aligned with industry and individual requirements such that they can be deemed fit for purpose.</p>
2. Ensure that more information about industry's expectations of training delivery is available to training providers to improve their delivery and to consumers to enable more informed course choices	<p>Section 4 outlines the expectations of industry with regards to the delivery of training.</p>
3. Ensure that the qualification design better supports individuals to upskill and move easily from one related occupation to another.	<p>Qualification design has meant more flexibility for learners and greater support for graduates to move more easily between differing roles once employed, due to the flexibility of subject choice within qualifications. The inclusion of bracketed specialisations in the <i>ICT20219 Certificate II in Telecommunications Network Build and Operation</i>, <i>ICT20319 Certificate II in Telecommunications Technology</i>, <i>ICT30419 Certificate III in Telecommunications Network Build and Operation</i>, <i>ICT30519 Certificate III in Telecommunications Technology</i>, and <i>ICT41219 Certificate IV in Telecommunications Engineering Technology</i> allows for graduate learners to signal to their employers the nature of the skill set they have chosen to specialise in, with greater ability to up-skill or change skill sets.</p> <p>Attempts at minimising prerequisites were made, however strong industry need to ensure industry specific safety prerequisites remained. No prerequisites were added to</p>

COAG Industry and Skills Council principles	Consideration
	new units created, except in units that created an easier, more flexible pathway for students seeking specific ACMA registration.
4. Improve the efficiency of the training system by creating units that can be owned and used by multiple industry sectors	The nature of the consultations, that of consulting national and multi-national employers, peak bodies, RTOs, and other stakeholders (see Appendix A Table iii), has meant that the consideration of skills meeting demand requirements in multiple sectors has been inherent in the construction of the changes to the training products.
5. Foster greater recognition of skill sets	Skill sets are commonly used to support the training needs of the telecommunications industry. Four new skill sets have been created in response to industry demand. Ten skill sets have been updated to reflect changing industry needs.

8.2 Alignment of Training Package development work with work assigned by AISC in Case for Change

The Activity Order for this Case for Change was for a review of 86 units of competency (73 existing and 13 new) within the ICT Training Package. The Activity Order encompassed two projects: 1E and 1F. A Case for Endorsement for Project 1E was approved by the AISC in September 2018.

The final result of our Training Package development work as part of Project 1F was to update 42 units of competency, delete 2 units of competency, and create 13 new units of competency. The 1F development work also included endorsable changes to six existing ICT qualifications, in order to fulfil a skills gap outlined by industry.

In addition, a number of non-endorsable amendments to training products were made as part of this Case for Endorsement. A list of the non-endorsable changes is available in **Appendix C**.

8.3 Evidence that Training Package components are prepared for publication

All draft Training Package components are included in this Case for Endorsement. Subject to the AISC's endorsement of the Training Package components, they are ready for publication on the National Register.

We expect Release 5.0 of the ICT Training Package to be published on the National Register by May 2019.

9 A copy of the full content of the proposed Training Package components

A copy of the full content of the developed Training Package components has been provided to the AISC for approval as an additional attachment to this Case for Endorsement.

Appendixes

Appendix A – Consultation list

The tables below list the stakeholders who provided feedback throughout PwC's Skills for Australia training product development work in their capacity as Industry Reference Committee (IRC) members, or through their participation in the Project Working Group, consultation in targeted interviews, and feedback on draft training products published on the project webpage.

The process for the consultation process has been outlined in Section 3.1 of the Case for Endorsement.

Industry Reference Committee Members

Table i IRC Members 2018

Individual	Organisation
Alison Wall (Deputy Chair)	National Broadband Network
Ashley Hutton	Digital Transformation Agency
Charles Hoang	Australian Industry Group
David Masters	Microsoft Australia
Emma Broadbent	CISCO Networking Academy and Social Innovation Group - ANZ and Pacific Islands
Emma McDonald	Telstra
James Wyatt (Chair)	Optimi Digital
Kevin Harris	Australian Information Industry Association
Louise Smith	Australian Computer Society
Melanie Brenton	Industry Skills Advisory Council Northern Territory
Owen Pierce	Australian Cyber Security Growth Network
Patrick Emery	Australian Communications and Media Authority (ACMA)
Rosalind Eason	Communication Workers Union Of Australia (CWU)

Project Working Group

Table ii Project Working Group Members

Individual	Title	Organisation	State
Alison Wall (Project Sponsor)	Curriculum Lead	National Broadband Network	VIC
David Smithwick	Divisional Industrial Officer (Telecommunications)	Communication Workers Union	VIC
Emma McDonald	Graduates and Entry Level Pathways	Telstra	VIC

Individual	Title	Organisation	State
Greg Kenyon	Contractor Relations Group Manager	Tandem	VIC
Omar Hammoud	MS Delivery Manager	Ericsson	VIC
Patrick Scharf	Industry Manager	UpWindOverDrive	QLD
Stephen Elston	Training Manager	Downer Group	QLD

Targeted consultations

Table iii Identifiable stakeholders consulted

Individual stakeholder names may be requested.

Appendix B – Detailed information on feedback received in consultation

This section outlines additional updates that will be implemented when the Information and Communications Technology Training Package Version 5.0 is released on the National Register.

Modifying core units across Certificate II to Certificate IV qualifications

Industry stakeholders provided input on the suitability of the current core units of Certificate II to Certificate IV qualifications as below.

ICT20219 Certificate II in Telecommunications Network Build and Operation

Consultations with carriers and their delivery partners highlighted changes were required to the packaging rules that currently prevent learners from easily completing training. Whilst the total number of units required to complete the qualification remain unchanged, the number of core units has increased by one unit, compared to the previous version, and the elective requirement has decreased by one unit. Group A has been split into two groups: Group A Cabling and Group B Telecommunications. Group C General has also been introduced to the qualification.

Stakeholders agreed that *CPCCOHS1001A Work safely in the construction industry* was not required as a core unit and that a technical unit around telecommunications principles would be more appropriate. A new unit *ICTTEN211 Work effectively in a telecommunications network environment* has been developed and is included as a core unit across the Certificate II qualifications, including ICT20219. Stakeholders also strongly recommended a customer service unit be included in the core, thus *ICTWOR308 Provide customer service to telecommunications customers*, has also been included.

ICT20319 Certificate II in Telecommunications Technology

From consultations with employers and Job Network providers, this qualification needed to be updated to better prepare entrants to the telecommunications industry. Employers supported reducing the number of units required for completion of this qualification from 15 to 13. As a result, the core unit requirement has been increased by one and the elective unit requirement has been reduced by three.

With regards to sustainability as a core skill, employers commented that it was not an essential competency for entry-level telecommunications jobs. Participants at workshops broadly agreed with these sentiments and specifically identified *BSBSUS201 Participate in environmentally sustainable work practices* as being not fit for purpose in its current form and as such requiring removal from the core of ICT20319 to address industry and employer concerns.

Stakeholders agreed that a unit covering telecommunications principles was an essential unit to have in the core of the qualification and *ICTTEN211 Work effectively in a telecommunications network environment* covers this requirement. The need for a customer service unit to be included in the core for entry level had support from industry and RTOs alike for the *BSBCUS201 Deliver a service to customers*.

ICT30419 Certificate III in Telecommunications Network Build and Operation

Consultations with carriers and their delivery partners identified the need to update this qualification to meet the changing nature and skills required for carrier technology being deployed. With regards to sustainability as a core skill, employers considered that this was not an essential competency for entry-level telecommunications jobs. RTO representatives broadly agreed with these sentiments and specifically identified *BSBSUS401 Implement and monitor environmentally sustainable work*

practices as being not fit for purpose in its current form and as such requiring removal from the core of ICT30419.

Stakeholders were also of the opinion that additional technical skills were essential for entry level telecommunications jobs, and to meet this need, the core unit requirement has been increased from five to six. *ICTTEN315 Determine and apply technologies within a telecommunications system* has been included in the core, together with two new units, *ICTTEN317 Locate, identify and rectify telecommunications network faults* and *ICTWOR308 Provide customer service to telecommunications customers*. These new units address the gap in skills and knowledge that are required by industry at this vocational level.

ICT30519 Certificate III in Telecommunications Technology

From consultations, employers agreed that this qualification required more flexibility as it was a major pathway for entry into the telecommunications industry. The number of units required to complete the qualification remains unchanged, however, the core requirement has been decreased from seven units to six, and the elective unit requirement has been increased from nine to ten, to ensure flexibility is available for all learners.

From consultation, employers expressed a need for the core units to be modified as they were not meeting their needs. As a result, four core units have been removed and replaced by three new units. Three core units remain unchanged.

ICT41119 Certificate IV in Telecommunications Network Design

From consultation, employers agreed that the two workplace core units were not essential skills and should be removed from the core. They have therefore been moved to the elective bank to enable them to be delivered within the qualification, if required. As a result, the core unit requirement has been reduced from eight to six. To ensure integrity of the qualification, the total number of units required to complete the qualification has remained unchanged, as the elective unit requirement has been increased from eight to ten.

ICT41219 Certificate IV in Telecommunications Engineering Technology

From consultation, employers agreed that the two workplace units in the core were not essential skills and should be removed. They also agreed that the remaining core units should be updated to reflect current skill needs and as a result the core units have been modified by removing six units and replacing them with two more appropriate units. Consequently, whilst the number of units required to complete the qualification remains unchanged, the core unit requirement has been reduced from eight to four, and the elective unit requirement has been increased from eight to 12.

Streamlining Certificate III qualifications

Throughout consultation, the prevailing view from employers has been that both the ICT30215 Certificate III in Telecommunications Digital Reception Technology and ICT30315 Certificate III in Telecommunications Rigging should be removed as full qualifications and incorporated as specialist elective groups in the ICT30519 Certificate III in Telecommunications Technology due to lack of relevance to industry. While there are currently four RTOs on scope to deliver ICT30215 Certificate III in Telecommunications Digital Reception Technology and two RTOs on scope to deliver ICT30315 Certificate III in Telecommunications Rigging, the qualifications are not being delivered due to lack of demand.

Packaging rules and bracketed specialisations

Stakeholders provided a view on whether the current structures of the Certificate III qualifications were leading to adequate employer experiences with graduates of the qualifications. The prevailing view that arose from consultation was as follows:

ICT30419 Certificate III in Telecommunications Network Build and Operation

This qualification is required to meet the needs of the Telecommunication infrastructure including National Broadband Network (NBN), legacy Telecommunication Network and training for the specialist private networks. There was support from industry and RTO's to provide greater flexibility

to enable opportunities across the different vocational environments covered by the Broadband Network. As the build of the network finishes there will be a transition to operation and maintenance within the carrier network with more opportunities within connection of customer premises, thus greater flexibility is required.

During consultation, employers were supportive of the current structure and packaging rules, with a minor amendment of increasing the core unit requirement from five to six core units and decreasing the elective requirement from nine to eight, to increase flexibility as required.

ICT30519 Certificate III in Telecommunications Technology

Stakeholders agreed that ICT30215 Certificate III in Telecommunications Digital Reception Technology and ICT30315 Certificate III in Telecommunications Rigging are no longer relevant stand-alone qualifications. The specialist units within those qualifications have now been grouped as specialisations under Digital Reception Technology and Rigging to enable students to undertake these specialisations.

Packaging rules have remained similar, however a slight change has been made to reflect the new grouping of units, with the previous seven core units and nine elective units, changed to six core units and ten elective units.

Introducing entry requirements into Certificate IV qualifications

Crucial to the Australian economy is a Broadband Network that is safe, reliable, and provides businesses and the community with communication services. At the Certificate IV level it is critical that those technicians that are entrusted with installing and servicing the highly complex and vulnerable network are appropriately trained to undertake the work in a safe and experienced manner. Poor skill levels result in network unreliability that potentially impacts the productivity of the Australian economy and can place lives at risk through an impact on the delivery of emergency services. Therefore, industry fully endorses the introduction of entry requirements at the Certificate IV level and has acknowledged the need for requirements to be flexible, while maintaining the integrity of those entry requirements. Industry considers that this has been achieved through the various pathways offered in the entry requirements.

ICT41119 Certificate IV in Telecommunications Network Design

- *Certificate IV in Telecommunications Network Design* provides capability for learners in designing the build of network infrastructure. Industry stakeholders supported this qualification as it enables the workforce to gain skills in designing the capacity of the network infrastructure to meet current and future digital needs.
 - Entry requirements have been introduced to this qualification. Entry is limited to those individuals who:
 - have completed a Certificate II or III in Telecommunications from the current or past ICT Training Package and have at least certified evidence of 700 hours of work experience, within the related scope of the qualification undertaken, which may have occurred concurrent with or after the qualification was completedor
 - have completed a Certificate II or III in Electrotechnology from the UEE Electrotechnology Training Package, and have at least certified evidence of 700 hours of work experience, within the related scope of the qualification undertaken, which may have occurred concurrent with or after the qualification was completed
- or

- have completed a Certificate II or III in Telecommunications from the current or past ICT Training Package and are enrolled in this Certificate IV as part of a Traineeship or Apprenticeship program or concurrently employed within the ICT industry
- or

- hold a current 'Unrestricted' Electrical Licence from any Australian State or Territory

or

- is a Registered ACMA Cabler with Open Registration and have at least certified evidence of 2100 hours of work experience, within the scope of customer premises cabling or telecommunications carrier work.

ICT41219 Certificate IV in Telecommunications Engineering Technology

Industry supports *Certificate IV in Telecommunications Engineering Technology* as it provides the advanced technician (technical officer), team leader or supervisor with a wide range of telecommunications skills that are demanded to meet the installation requirements of the various specialist networks, converging technologies, and customer equipment within the telecommunications environment.

- Entry requirements have been introduced to this qualification. Entry is limited to those individuals who:
 - have completed a Certificate II or III in Telecommunications from the current or past ICT Training Package and have at least certified evidence of 700 hours of work experience, within the related scope of the qualification undertaken, which may have occurred concurrent with or after the qualification was completed

or

- have completed a Certificate II or III in Electrotechnology from the UEE Electrotechnology Training Package, and have at least certified evidence of 700 hours of work experience, within the related scope of the qualification undertaken, which may have occurred concurrent with or after the qualification was completed

or

- have completed a Certificate II or III in Telecommunications from the current or past ICT Training Package and is enrolled in this Certificate IV as part of a Traineeship or Apprenticeship program or concurrently employed within the ICT Industry

or

- hold a current 'Unrestricted' Electrical Licence from any Australian State or Territory

or

- is a Registered ACMA Cabler with Open Registration and have at least certified evidence of 2100 hours of work experience, within the scope of customer premises cabling or telecommunications carrier work.

Reviewing the electives for relevance

Following consultation throughout the project individual units were identified by consultees as being either not relevant to industry or having a significant or unnecessary duplication with other units.

Where a skills gap was evident, new units have been developed and included in appropriate qualifications. These individual unit recommendations are outlined in Section 2.2 Table 3.

Prerequisite units

There has been lengthy consultation regarding the purpose and place of prerequisites within telecommunications units of competency, and consideration was given in regard to minimising prerequisite unit requirements in the newly developed units of competency. Industry confirmed that no prerequisites should be added to the amended units, however, none should be deleted given the safety imperatives and knowledge skills associated with the units in which the prerequisites were listed to ensure learners are appropriately trained and to minimise upheaval in the training system. Similarly, prerequisites were minimised or avoided when creating the new units of competency as per industry need.

However, there have been some introduced changes to prerequisite requirements within some units of competency, as per industry requirements and demand, to ensure flexible pathways into registration

licenses as well as to adhere to correct safety precautions for all learners. The changes for each unit are as follows:

ICTOPN404 Test optical communications systems and components

Prerequisite of ICTBWN307 *Use optical measuring instruments* has been added. Industry has determined that within this specialised area of advanced optical test equipment it is essential that the learner has undertaken ICTBWN307 to support the successful completion of the higher-level unit. Workers need to be appropriately trained in this area to ensure the continuity of services to businesses, industry and community.

ICTCBL323 Test cables and systems on customer premises

This unit of competency is a requirement for voluntary registration with the regulatory body ACMA. It was developed for those ACMA Registered Cablers who are required to carry out cable and system tests on customer premises. Industry and the Cabler Registry Services that issue ACMA registrations can only register this unit of competency if the cabler has completed ICTCBL247 *Install, maintain and modify customer premises communications cabling: ACMA Open Rule*. It is therefore essential to the successful outcome and to the vocational learner that this unit is a prerequisite.

ICTCBL247 Install, maintain and modify customer premises communications cabling: ACMA Open Rule

This unit of competency has been redesigned as a standalone unit to provide a flexible entry into the ACMA cabling provider rules - Pathways to cabling registration. This is an ACMA Regulatory requirement for working on customer premises.

ICTCBL247 previously had a prerequisite unit ICTCBL246 *Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule*.

Flexibility has been provided by updating the prerequisites in ICTCBL247 (previously ICTCBL237) to cover those areas within ICTCBL236 that have since been removed as prerequisites. However, to meet ACMA registration and vocational outcomes for work within customer premises as an Open Registered Cabler, the prerequisite units that were previously attached to ICTCBL236 are now included within ICTCBL247. This is essential to achieve both vocational and registration outcomes.

Hence, ICTCBL247 *Install, maintain and modify customer premises communications cabling: ACMA Open Rule* has the following introduced prerequisite requirements to allow for greater registration flexibility:

- *ICTWHS204 Follow work health and safety and environmental policy and procedures*
- *ICTTEN208 Use electrical skills when working with telecommunications networks.*

Appendix C – Non-endorsable Training Package components

This section outlines additional updates that will be implemented when the Information and Communications Technology Training Package Version 5.0 is released on the National Register.

Non-endorsable changes

The IRC approved the non-endorsable updates detailed in Tables 4, 5 and 6.

Table iv Summary of non-endorsable Training Package components submitted

Training package component	Number of training products
Non endorsable qualification changes made	3
Non endorsable unit changes made	21
Skill sets amended – non-equivalent	10
Skill sets amended – equivalent	10
Skill sets created	4

Table v Non-endorsable Training Package components submitted

Current training product code	New training product code	Training product title	New / existing / deleted training product
Qualifications			
ICT30118	N/A	Certificate III in Information, Digital Media and Technology	Existing
ICT40215	N/A	Certificate IV in Information Technology Support	Existing
ICT40418	N/A	Certificate IV in Information Technology Networking	Existing
Units of Competency			
ICTCBL205	N/A	Joint metallic conductor cable on customer premises	Existing
ICTCBL206	N/A	Alter services to existing cable system	Existing
ICTCBL210	N/A	Install a telecommunications service to a building	Existing
ICTCBL238	N/A	Install, maintain and modify customer premises communications cabling: ACMA Lift Rule	Existing
ICTCBL301	N/A	Install, terminate and certify structured cabling installation	Existing
ICTCBL303	N/A	Install and terminate coaxial cable	Existing
ICTCBL305	N/A	Hand over cable systems and equipment	Existing

Current training product code	New training product code	Training product title	New / existing / deleted training product
ICTCBL306	N/A	Locate and identify cable system faults	Existing
ICTCBL313	N/A	Modify and cutover cable	Existing
ICTCBL316	N/A	Install ribbon fibre cable in the FTTX distribution network	Existing
ICTCBL319	N/A	Rearrange large size copper cable	Existing
ICTDRE301	N/A	Install digital reception equipment	Existing
ICTDRE303	N/A	Install a complex digital reception system	Existing
ICTPMG201	N/A	Prepare site for support installation	Existing
ICTPRG415	N/A	Apply skills in object-oriented design	Existing
ICTSAS410	N/A	Identify and resolve client ICT problems	Existing
ICTRFN406	N/A	Maintain hybrid fibre coaxial broadband cable network	Existing
ICTTEN202	N/A	Use hand and power tools	Existing
ICTTEN307	N/A	Repair and replace telecommunications network hardware	Existing
ICTWHS204	N/A	Follow work health and safety and environmental policy and procedures	Existing
ICTWOR307	N/A	Collect and analyse technical information	Existing
Skill Sets			
ICTSS00058	N/A	Advanced Cabler Registration	Existing
ICTSS00060	ICTSS00088	Advanced Telecommunications Rigging Installation	Existing
ICTSS00062	ICTSS00084	Basic Open Cabler Registration	Existing
ICTSS00063	ICTSS00085	Basic Restricted Cabler Registration	Existing
ICTSS00064	ICTSS00089	Basic Telecommunications Rigging Installation	Existing
ICTSS00065	N/A	Civil Works – Installation of Pit and Pipe and FDH	Existing
ICTSS00066	N/A	Commercial Digital Television Antenna Systems	Existing
ICTSS00067	ICTSS00090	Install and Test Smart Devices in Premises	Existing
ICTSS00069	N/A	Domestic Digital Television Antenna Installation	Existing
ICTSS00071	N/A	IP Convergence Installations for Home and SME	Existing
ICTSS00074	ICTSS00091	Radio Technician	Existing
ICTSS00075	ICTSS00092	Technical Help Desk Support	Existing
ICTSS00076	N/A	Wireless LAN and IP Network Installation	Existing
ICTSS00077	N/A	Telecommunications Linesworker Copper	Existing
ICTSS00078	N/A	Telecommunications Linesworker Fibre	Existing
ICTSS00079	ICTSS00093	Telecommunications Linesworker HFC	Existing
ICTSS00080	N/A	Copper Cable Jinter	Existing
ICTSS00081	ICTSS00094	Technician Fibre	Existing

Current training product code	New training product code	Training product title	New / existing / deleted training product
ICTSS00082	ICTSS00095	Fibre Splicer	Existing
ICTSS00083	N/A	Underground Installations	Existing
ICTSS00096	N/A	Technician Hybrid Fibre Coaxial	New
ICTSS00097	N/A	Telecommunications Customer Service Technician – HFC Technician	New
ICTSS00098	N/A	Network Technician HFC	New
ICTSS00099	N/A	Basic Technician Network Build and Operate	New

Table vi Summary of non-endorsable changes

Update the following existing qualifications to reflect updated non-equivalent elective units:

- ICT30110 Certificate III in Information, Digital Media and Technology
- ICT40215 Certificate IV in Information Technology Support
- ICT40418 Certificate IV in Information Technology Networking

Modify the following existing qualification to include ICTCBL238 (orphaned unit of competency) as an elective, to align to industry needs:

- ICT30519 Certificate III in Telecommunications Technology (Group C)

Update the following units of competency to reflect minor amendments within the following broad categories:

Category: Assessment Requirements and Foundation Skills minor changes

- ICTCBL205 Joint metallic conductor cable on customer premises
- ICTCBL238 Install, maintain and modify customer premises communications cabling: ACMA Lift Rule
- ICTCBL301 Install, terminate and certify structured cabling installation
- ICTCBL303 Install and terminate coaxial cable
- ICTCBL305 Hand over cable systems and equipment
- ICTCBL306 Locate and identify cable system faults
- ICTDRE301 Install digital reception equipment
- ICTDRE303 Install a complex digital reception system
- ICTTEN307 Repair and replace telecommunications network hardware

Category: Performance Criteria, Assessment Requirements and Foundation Skills minor changes

- ICTCBL206 Alter services to existing cable system
- ICTCBL313 Modify and cutover cable
- ICTCBL316 Install ribbon fibre cable in the FTTX distribution network
- ICTCBL319 Rearrange large size copper cable
- ICTPMG201 Prepare site for support installation
- ICTRFN406 Maintain hybrid fibre coaxial broadband cable network
- ICTTEN202 Use hand and power tools

Category: Element, Assessment Requirements and Foundation Skills minor changes

- ICTCBL210 Install a telecommunications service to a building

Category: one minor formatting or typographical error changed

- ICTPRG415 Apply skills in object-oriented design
- ICTSAS410 Identify and resolve client ICT problems
- ICTWHS204 Follow work health and safety and environmental policy and procedures
- ICTWOR307 Collect and analyse technical information

Minor changes made to the following ten existing skill sets to align to industry needs:

- ICTSS00088 Advanced Telecommunications Rigging Installation – removal of unit ICTCBL208 Splice and terminate optical fibre cable for carriers and service providers
- ICTSS00084 Basic Open Cabler Registration– removal of unit ICTCMP203 Perform restricted customer premises broadband cabling work: ACMA Restricted Rule (previously ICTCMP202), and update equivalent units
- ICTSS00085 Basic Restricted Cabler Registration – amend title and update equivalent units
- ICTSS00089 Basic Telecommunications Rigging Installation – removal of units ICTTEN207 Install and test internet protocol devices in convergence networks, ICTRFN201 Install a satellite antenna, ICTCBL208 Splice and terminate optical fibre cable for carriers and service providers; addition of units CPCCLDG3001A Licence to perform dogging. CPCCLRG3001A Licence to perform rigging basic level, ICTRFN301 Install a radio communications antenna and feedline;
- ICTSS00090 Install and test smart devices in premises – amend title, removal of units ICTTEN404 Install and configure a wireless mesh network, ICTTEN416 Install, configure and test an internet protocol network, ICTTEN418 Install and test a radio frequency identification system, ICTRFN407 Conduct radio frequency measurements (previously ICTRFN401); addition of units ICTDRE302 Locate and rectify digital reception equipment faults ICTEDU301 Train customers in new technology,
- ICTSS00091 Radio Technician – addition of unit ICTRFN407 Conduct radio frequency measurements (previously ICTRFN401), and update equivalent units
- ICTSS00092 Technical Help Desk Support – removal of unit ICTWOR307 Collect and analyse technical information, addition of unit ICTWOR308 Provide customer service to telecommunications customers
- ICTSS00093 Telecommunications Linesworker HFC – removal of units ICTCBL211 Install an above ground equipment enclosure and ICTBWN305 Use optical and radio frequency measuring instruments; addition of unit ICTCBL207 Haul underground cable; and updated equivalent units
- ICTSS00094 Technician Fibre – addition of units ICTBWN307 Use optical measuring instruments, ICTWHS204 Follow work health and safety and environmental policy and procedures and updated equivalent units
- ICTSS00095 Fibre Splicer – addition of units ICTBWN307 Use optical measuring instruments, ICTWHS204 Follow work health and safety and environmental policy and procedures, ICTCBL330 Splice and terminate optical fibre cable for telecommunications projects and updated equivalent units

Update the following existing skill sets to reflect updated equivalent units:

- ICTSS00058 Advanced Cabler Registration
 - ICTSS00065 Civil Works – Installation of Pit and Pipe and FDH
 - ICTSS00066 Commercial Digital Television Antenna Systems Installation
 - ICTSS00069 Domestic Digital Television Antenna Installation
 - ICTSS00071 IP Convergence Installations for Home and SME
 - ICTSS00076 Wireless LAN and IP Network Installation
 - ICTSS00077 Telecommunications Linesworker Copper
 - ICTSS00078 Telecommunications Linesworker Fibre
 - ICTSS00080 Copper Cable Jointer
 - ICTSS00083 Underground Installations Skill Set
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Appendix D – Quality Assurance Reports

Editorial Reports

The following editorial reports were produced by Sally Tansley and Kerry Jennings as part of the quality assurance process. As detailed in section 7.1, two editorial reports were produced for this project. The first by Sally Tansley and the addendum by Kerry Jennings.

Editorial Report Sally Tansley (note: qualification codes in report were subsequently recoded with '19' year code)

1. Cover page	
Information required	Detail
Training Package title and code	Information and Communications Technology Release 5.0
Number of new qualifications and their titles	NA
Number of revised qualifications and their titles	6 revised qualifications: ICT20218 Certificate II in Telecommunications Network Build and Operate ICT20318 Certificate II in Telecommunications Technology ICT30418 Certificate III in Telecommunications Network Build and Operate ICT30518 Certificate III in Telecommunications Technology ICT41118 Certificate IV in Telecommunications Network Design ICT41218 Certificate IV in Telecommunications Engineering Technology NA – note two qualifications have been deleted and a number of skill sets have been created and amended.
Number of new units of competency and their titles	13 new units (see case for endorsement for titles)

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Number of revised units of competency and their titles	41 amended units (see case for endorsement for titles)
Confirmation that the draft training package components are publication-ready	Yes
Is the Editorial Report prepared by a member of the Quality Assurance Panel? If 'yes' please provide a name.	Yes, Sally Tansley is a member of the Quality Assurance Panel.
Date of completion of the report	16 July 2018

2. Content and structure

Units of competency

Editorial requirements	Comments
Standard 5: <ul style="list-style-type: none"> The structure of units of competency complies with the unit of competency template. 	Yes
Standard 7: <ul style="list-style-type: none"> The structure of assessment requirements complies with the assessment requirements template. 	Yes

Qualifications

Editorial requirements	Comments by the editor
Standard 9: <ul style="list-style-type: none"> The structure of the information for qualifications complies with the qualification template. 	Yes
Standard 10:	Not applicable

Editorial requirements	Comments by the editor
<ul style="list-style-type: none"> Credit arrangements existing between Training Package qualifications and Higher Education qualifications are listed in a format that complies with the credit arrangements template. 	

Companion Volumes

Editorial requirements	Comments by the editor
<p>Standard 11:</p> <ul style="list-style-type: none"> A quality assured companion volume implementation guide is available and complies with the companion volume implementation guide template. 	<p>A companion volume guide was provided and complies with the template.</p>

3. Proofreading

Editorial requirements	Comments by the editor
<ul style="list-style-type: none"> Unit codes and titles and qualification codes and titles are accurately cross-referenced throughout the training package product(s) including mapping information and packaging rules, and in the companion volume implementation guide. 	<p>Yes. Minor edits were made and implemented.</p>
<ul style="list-style-type: none"> Units of competency and their content are presented in full. 	<p>Yes</p>

Editorial requirements	Comments by the editor
<ul style="list-style-type: none"> • The author of the Editorial Report is satisfied with the quality of the training products, specifically with regard to: <ul style="list-style-type: none"> ○ absence of spelling, grammatical and typing mistakes ○ consistency of language and formatting ○ logical structure and presentation of the document. ○ compliance with the required templates 	<p>No. All training products were reviewed and multiple comments were made. Some recommendations were accepted but I still believe there are significant issues with the Training Products, most notably:</p> <ul style="list-style-type: none"> • New units (ICTTEN211, ICTTEN208, ICTTEN315 and ICTTEN316) are not written in compliance with the unit of competency template and do not reflect standard units of competency that reflect task based outcomes. • Inconsistency/lack of clarity in wording, for example, many units include the performance criteria “obtain relevant legislation, codes, regulations and standards when conducting work” but are silent on what candidates are to do once they have obtained them. I also believe this should be reflected in the knowledge evidence of the unit. • Units with longwinded performance criteria that would improve usability if summarised, Examples include but are not limited to ICTWHS205 and ICTBL246. • Use of broad statements which may not be clear e.g. in the unit ICTCBL241 Complete telecommunications cabling advice (TCA) forms as required by telecommunications industry and in the unit ICTTEN317 Restore worksite to acceptable industry standard.

Editorial Report Addendum Kerry Jennings

1. Cover page	
Information required	Detail
Training Package title and code	ICT Information and Communications Technology Training Package Version 5.0
Number of new qualifications and their titles	
Number of revised qualifications and their titles	
Number of new units of competency and their titles	
Number of revised units of competency and their titles	
Confirmation that the draft training package components are publication-ready	
Is the Editorial Report prepared by a member of the Quality Assurance Panel? If 'yes' please provide a name.	Kerry Jennings
Date of completion of the report	27 November 2018

EDITORIAL REPORT ADDENDUM	<p>In response to the July 2018 editorial report and preliminary QA feedback, the training package developers engaged a member of the Quality Assurance Panel to work with them to respond to this feedback.</p> <p>Read in conjunction with the July 2018 editorial report, this addendum provides additional information in relation to the approaches taken by the training package developers.</p>
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2. Content and structure

Units of competency

Editorial requirements	Comments
Standard 5: <ul style="list-style-type: none"> The structure of units of competency complies with the unit of competency template. 	
Standard 7: <ul style="list-style-type: none"> The structure of assessment requirements complies with the assessment requirements template. 	

Qualifications

Editorial requirements	Comments by the editor
Standard 9: <ul style="list-style-type: none"> The structure of the information for qualifications complies with the qualification template. 	
Standard 10: <ul style="list-style-type: none"> Credit arrangements existing between Training Package qualifications and Higher Education qualifications are listed in a format that complies with the credit arrangements template. 	

Companion Volumes

Editorial requirements	Comments by the editor
Standard 11: <ul style="list-style-type: none"> A quality assured companion volume implementation guide is available and complies with the companion volume implementation guide template. 	

3. Proofreading	
Editorial requirements	Comments by the editor
<ul style="list-style-type: none">• Unit codes and titles and qualification codes and titles are accurately cross-referenced throughout the training package product(s) including mapping information and packaging rules, and in the companion volume implementation guide.	
<ul style="list-style-type: none">• Units of competency and their content are presented in full.	

- The author of the Editorial Report is satisfied with the quality of the training products, specifically with regard to:
 - absence of spelling, grammatical and typing mistakes
 - consistency of language and formatting
 - logical structure and presentation of the document.
 - compliance with the required templates

The July 2018 editorial report states:

‘No. All training products were reviewed and multiple comments were made. Some recommendations were accepted but I still believe there are significant issues with the Training Products, most notably:

- New units (ICTTEN211, ICTTEN208, ICTTEN315 and ICTTEN316) are not written in compliance with the unit of competency template and do not reflect standard units of competency that reflect task based outcomes.
- Inconsistency/lack of clarity in wording, for example, many units include the performance criteria “obtain relevant legislation, codes, regulations and standards when conducting work” but are silent on what candidates are to do once they have obtained them. I also believe this should be reflected in the knowledge evidence of the unit.
- Units with longwinded performance criteria that would improve usability if summarised, Examples include but are not limited to ICTWHS205 and ICTBL246.
- Use of broad statements which may not be clear e.g. in the unit ICTCBL241 Complete telecommunications cabling advice (TCA) forms as required by telecommunications industry and in the unit ICTTEN317 Restore worksite to acceptable industry standard.’

It is my opinion that the issues raised have been addressed by the developer:

- the units identified have been edited so that they comply with the unit of competency template
- the units submitted for endorsement have been edited for consistency within units and for consistency across units
- issues around clarity have been addressed for example, learners need to ‘obtain and read’ documents and undertake work according to specific documents
- legislation, regulations, codes, standards and other formal agreements have been listed as Knowledge Evidence
- Performance Criteria (PC) have been written according to industry requirements that units reflect the breadth and depth of the performance needed to demonstrate achievement of the Element, for example:
 - PC2.3 Complete a job safety analysis (JSA) or similar risk assessment record, listing potential safety hazards associated with site and work

Editorial requirements	Comments by the editor
	<p>requirements, and report safety hazards to relevant personnel (ICTWHS205 Work safely near power infrastructure at a telecommunications workplace) – may appear to be a longwinded PC to some and ‘that would improve usability if summarised’ whereas to industry the PC is usable as written</p> <ul style="list-style-type: none"> ○ PC3.6 Use appropriate underground cable installation techniques associated with minimum depth of cover and segregation from hazardous electrical and other services according to current Australian Standards (ICTCBL246 Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule) – again, industry sign-off indicates usability • what may appear to some to be ‘broad statements which may not be clear’, will be succinct and clear to industry, for example, PC4.3 Complete telecommunications cabling advice (TCA) forms is part of E4. Complete records and clean-up site (ICTCBL241 Terminate metallic conductor customer cable) – industry gets this and attempts to ‘clarify’ run the risk of doing the opposite • the units of competency reflect the reality that performance needed to demonstrate achievement of an Element will be site specific so, in <i>ICTTEN317 Locate, identify and rectify telecommunications network faults</i>, PC4.2 Restore worksite according to enterprise procedures is regarded by industry as adequate.

Equity Reports

The following equity reports were produced by Sally Tansley and Kerry Jennings as part of the quality assurance process. As detailed in section 7.1, two equity reports were produced for this project. The first by Sally Tansley and the addendum by Kerry Jennings.

Equity Report Sally Tansley

Section 1 – Cover page

Information required	Detail
Training Package title and code	Information and Communications Technology Release 5.0
Number of new qualifications and their titles	NA
Number of revised qualifications and their titles	6 revised qualifications: ICT20218 Certificate II in Telecommunications Network Build and Operation ICT20318 Certificate II in Telecommunications Technology ICT30418 Certificate III in Telecommunications Network Build and Operation ICT30518 Certificate III in Telecommunications Technology ICT41118 Certificate IV in Telecommunications Network Design ICT41218 Certificate IV in Telecommunications Engineering Technology NA – note two qualifications have been deleted and a number of skill sets have been created and amended.
Number of new units of competency and their titles	13 new units (see case for endorsement for titles)
Number of revised units of competency and their titles	41 amended units (see case for endorsement for titles)

Information required	Detail
Confirmation that the draft training package components meet the requirements in Section 2 <i>Equity checklist of draft training package components</i>	Yes
Is the Equity Report prepared by a member of the Quality Assurance Panel? If 'yes' please provide the name.	Yes, Sally Tansley is a member of the Quality Assurance Panel.
Date of completion of the report	4 September 2018 (updated from July report)

Section 2 – Equity checklist of draft training package components

Equity requirements	Equity reviewer comments
	Provide brief commentary on whether the draft endorsed components meet each of the equity requirements
<p>The training package component(s) comply with Standard 2 of the <i>Standards for Training Packages 2012</i>. The standard requires compliance with the <i>Training Package Products Policy</i>, specifically with the access and equity requirements:</p> <p>Training Package developers must meet their obligations under Commonwealth anti-discrimination legislation and associated standards and regulations.</p> <p>Training Package developers must ensure that Training Packages are flexible and that they provide guidance and recommendations to enable reasonable adjustments in implementation.</p>	<p>Yes. The components reviewed as part of this project comply with the Training Package Products policy with respect to access and equity.</p> <p>Access and equity and reasonable adjustment information is included in the implementation guide.</p> <p>I believe there are flexibility issues as described below.</p>

Section 3 - Training Package Quality Principles

Quality Principle 4

Be **flexible** to meet the diversity of individual and employer needs, including the capacity to adapt to changing job roles and workplaces.

Key features

Do the units of competency meet the diversity of individual and employer needs and support equitable access and progression of learners?

What evidence demonstrates that the units of competency and their associated assessment requirements are clearly written and have consistent breadth and depth so that they support implementation across a range of settings?

Are there other examples that demonstrate how the key features of flexibility are being achieved?

Equity requirements	Equity reviewer comments
1. What evidence demonstrates that the draft components provide flexible qualifications/units of competency that enable application in different contexts?	<p>The unit <i>ICTWOR308 Provide customer service to telecommunications clients</i> has been created but is essentially a customer service unit. I considered that combined with the technical units in the qualification, a unit to do with customer service from BSB would be a better choice to give learners pathways into other qualifications in other Training Packages e.g. <i>BSBCUS301</i>.</p> <p>This issue was discussed with the industry concluding as follows:</p> <p><i>ICTWOR308 is very different in elements, PC, and performance and knowledge evidence requirements than the BSB unit, due to the installation job tasks/skills being achieved in the telecommunications space through the servicing of clients.. Industry stakeholders specifically reviewed both <i>BSBCUS301</i> and <i>BSBCUS401</i> and identified them as being not fit for purpose, as they were considered too general. As such, industry strongly recommended that an industry-appropriate telecommunications customer service unit be developed to meet the relevant needs of supporting the customer in understanding the new technologies within the telecommunications network, including NBN, and the Smart equipment inside customer premises. Therefore the unit <i>ICTWOR308 Provide customer service to telecommunications clients</i> was developed and included in the qualification's core.</i></p>

Equity requirements	Equity reviewer comments
	Entry requirements for the Certificate IV qualifications have been justified in the Case for Endorsement.
2. Is there evidence of multiple entry and exit points?	Yes, there are numerous skill sets and lower level qualifications clearly lead into higher-level qualifications e.g. as per the entry requirements for Certificate IV.
3. Have prerequisite units of competency been minimised where possible?	<p>The ICTWHS205 unit has been included as a pre-requisite for a number of units yet all of the units reviewed have strong WHS components.</p> <p>These issues were discussed through the equity review process and industry has advised the following:</p> <ul style="list-style-type: none"> • No prerequisites should be added to the existing, amended units in this project • However, none should be deleted given the safety imperatives associated with the units in which the prerequisites were listed, and the core electrical skills needed before learners progress to the next, higher level unit. <p>Telecommunications industry stakeholders very strongly held that the prerequisites relating to workplace and occupational health and safety (WHS/OHS) and electrical skills, were critical in ensuring that “workers work in a safe environment and arrive home at the end of the day”. Although each unit of competency includes relevant work, health and safety awareness training, industry felt that the skills needed to be assessed <u>before</u> training in the unit given that telecommunications WHS competency is a prerequisite to most technical competencies and qualifications – as identified in the Case for Endorsement and Implementation Guide. This is also in line with some <i>Standards Australia</i> mandated regulations.</p>
4. Are there other examples of evidence that demonstrate how the key features of the flexibility principle are being achieved?	I did not consider there were further examples to illustrate this.

Quality Principle 5

Facilitate **recognition** of an individual's skills and knowledge and support movement between the school, vocational education and higher education sectors.

Key features

Support learner transition between education sectors.

Equity requirements	Equity reviewer comments
1. What evidence demonstrates pathways from entry and preparatory level as appropriate to facilitate movement between schools and VET, from entry level into work, and between VET and higher education qualifications?	There appear to be a range of pathways from entry level into work.

Quality Principle 6

Support interpretation by training providers and others through the use of simple, concise language and clear articulation of assessment requirements.

Key features

Support implementation across a range of settings and support sound assessment practices.

Equity requirements	Equity reviewer comments
1. Does the Companion Volume Implementation Guide include advice about: <ul style="list-style-type: none">• Pathways• Access and equity• Foundation skills? (see Training Package Standard 11)	Yes

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Equity requirements	Equity reviewer comments
2. Are the foundation skills explicit and recognisable within the training package and do they reflect and not exceed the foundation skills required in the workplace?	Yes, foundation skills are documented in the unit of competency reviewed. Minor recommendations were made for improving the clarity of the foundation skills and implemented.

Equity Report Addendum: Kerry Jennings

Section 1 – Cover page

Information required	Detail
Training Package title and code	ICT Information and Communications Technology Training Package Version 5.0
Number of new qualifications and their titles	
Number of revised qualifications and their titles	
Number of new units of competency and their titles	
Number of revised units of competency and their titles	
Confirmation that the draft training package components meet the requirements in Section 2 <i>Equity checklist of draft training package components</i>	
Is the Equity Report prepared by a member of the Quality Assurance Panel? If 'yes' please provide the name.	Kerry Jennings
Date of completion of the report	27 November 2018
EQUITY REPORT ADDENDUM	<p>In response to the September 2018 equity report and preliminary QA feedback, the training package developers engaged a member of the Quality Assurance Panel to work with them to respond to this feedback.</p> <p>Read in conjunction with the September 2018 equity report, this addendum provides additional information in relation to the approaches taken by the training package developers.</p>

Section 2 – Equity checklist of draft training package components

Equity requirements	Equity reviewer comments
<p>The training package component(s) comply with Standard 2 of the <i>Standards for Training Packages 2012</i>. The standard requires compliance with the <i>Training Package Products Policy</i>, specifically with the access and equity requirements:</p> <ul style="list-style-type: none"> • Training Package developers must meet their obligations under Commonwealth anti-discrimination legislation and associated standards and regulations. • Training Package developers must ensure that Training Packages are flexible and that they provide guidance and recommendations to enable reasonable adjustments in implementation. 	<p>Provide brief commentary on whether the draft endorsed components meet each of the equity requirements</p>

Section 3 - Training Package Quality Principles

Quality Principle 4

Be **flexible** to meet the diversity of individual and employer needs, including the capacity to adapt to changing job roles and workplaces.

Key features

Do the units of competency meet the diversity of individual and employer needs and support equitable access and progression of learners?

What evidence demonstrates that the units of competency and their associated assessment requirements are clearly written and have consistent breadth and depth so that they support implementation across a range of settings?

Are there other examples that demonstrate how the key features of flexibility are being achieved?

Equity requirements	Equity reviewer comments
<p>1. What evidence demonstrates that the draft components provide flexible qualifications/units of competency that enable application in different contexts?</p>	<p>The September 2018 equity report states:</p>

Equity requirements	Equity reviewer comments
	<p>‘The unit ICTWOR308 Provide customer service to telecommunications clients has been created but is essentially a customer service unit. I considered that combined with the technical units in the qualification, a unit to do with customer service from BSB would be a better choice to give learners pathways into other qualifications in other Training Packages e.g. BSBCUS301.’</p> <p>It is my opinion that rather than decrease flexibility, <i>ICTWOR308 Provide customer service to telecommunications customers</i> will increase flexibility because it covers customer service in a technical context and therefore shows in one unit what would need to be shown in at least two units if <i>BSBCUS301 Deliver and monitor a service to customers</i> was combined with technical units in a qualification.</p> <p><i>ICTWOR308 Provide customer service to telecommunications customers</i> is a core unit in:</p> <ul style="list-style-type: none"> • ICT20219 Certificate II in Telecommunications Network Build and Operation • ICT30419 Certificate III in Telecommunications Network Build and Operation • ICT30519 Certificate III in Telecommunications Technology. <p>Should graduates with one of these qualifications be looking for ‘pathways into other qualifications in other Training Packages’ then the comprehensive and contextual approach taken in <i>ICTWOR308 Provide customer service to telecommunications customers</i> would set the graduate up well for assessment only and skills recognition against <i>BSBCUS301 Deliver and monitor a service to customers</i>.</p> <p><i>BSBCUS401 Coordinate implementation of customer service strategies</i> would impact negatively on flexibility because it is focussed on coordination rather than providing customer service.</p>
<p>2. Is there evidence of multiple entry and exit points?</p>	
<p>3. Have prerequisite units of competency been minimised where possible?</p>	<p>The September 2018 equity report states:</p> <p>‘The ICTWHS205 [code was changed to ICTWHS204 post this report date] unit has been included as a pre-requisite for a number of units yet all of the units reviewed have strong WHS components.</p> <p>These issues were discussed through the equity review process and industry has advised the following:</p> <ul style="list-style-type: none"> • No prerequisites should be added to the existing, amended units in this project

Equity requirements	Equity reviewer comments
	<ul style="list-style-type: none"> • However, none should be deleted given the safety imperatives associated with the units in which the prerequisites were listed, and the core electrical skills needed before learners progress to the next, higher level unit.’ <p>The industry’s commitment to ensuring the safety of workers at work through a separate, specific unit of competency is historical:</p> <ul style="list-style-type: none"> • <i>ICTWHS203 Work safely near power infrastructure</i> was endorsed in 2016 • <i>ICTOHS2153B Work safely near power infrastructure</i> and <i>ICTOHS2153AA Work safely near power infrastructure</i> were endorsed in 2014 • <i>ICTCC100A Follow Occupational Health and Safety policy and procedures</i> was endorsed in 2009. <p>The September 2018 equity report states:</p> <p>Telecommunications industry stakeholders very strongly held that the prerequisites relating to workplace and occupational health and safety (WHS/OHS) and electrical skills, were critical in ensuring that “workers work in a safe environment and arrive home at the end of the day”. Although each unit of competency includes relevant work, health and safety awareness training, industry felt that the skills needed to be assessed before training in the unit given that telecommunications WHS competency is a prerequisite to most technical competencies and qualifications – as identified in the Case for Endorsement and Implementation Guide. This is also in line with some Standards Australia mandated regulations.</p> <p>The industry response indicates that in this instance, prerequisite units of competency have been minimised and that the minimum is for <i>ICTWHS204 Follow work health and safety and environmental policy and procedures</i> to be a prerequisite unit for specific ICT units.</p>
<p>4. Are there other examples of evidence that demonstrate how the key features of the flexibility principle are being achieved?</p>	<p>The September 2018 equity report states:</p> <p>‘I did not consider there were further examples to illustrate this.’</p> <p>Further evidence that the units of competency and their associated assessment requirements ‘have consistent breadth and depth so that they support implementation across a range of settings’ can be found in the Application where the work context is outlined. For example, the following text explains the settings or range of installations the unit can cover:</p>

Equity requirements	Equity reviewer comments
	<p>‘Cable installation may be for a new cable, a cable upgrade or a cable in need of repair. It can be applied to new installations and upgrades of telecommunications cabling projects in domestic, commercial and industrial customer installations.’ (ICTCBL251 Install aerial and underground cable lead-ins)</p> <p>Another example of how the flexibility principle is supported is in the qualification design where, in all qualifications, elective units account for over a third of the packaging possibilities and, for all but one qualification, about one sixth (or more) of these elective units are from other training packages.</p> <p>While the ‘reference to specific elective proportions in the packaging rules policy’ has been removed by the NSSC, the NSSC also ‘re-affirmed that qualification design should source electives from other qualifications within the host Training Package, another Training Package or from accredited courses.’ (NSSC Communiqué August 2013)</p> <p>This flexibility in the qualification design should assist in meeting the ‘diversity of individual and employer needs and support equitable access and progression of learners’.</p>

Quality Principle 5

Facilitate **recognition** of an individual’s skills and knowledge and support movement between the school, vocational education and higher education sectors.

Key features

Support learner transition between education sectors.

Equity requirements	Equity reviewer comments
<p>1. What evidence demonstrates pathways from entry and preparatory level as appropriate to facilitate movement between schools and VET, from entry level into work, and between VET and higher education qualifications?</p>	

Quality Principle 6

Support interpretation by training providers and others through the use of simple, concise language and clear articulation of assessment requirements.

Key features

Support implementation across a range of settings and support sound assessment practices.

Equity requirements	Equity reviewer comments
<p>1. Does the Companion Volume Implementation Guide include advice about:</p> <ul style="list-style-type: none"> • Pathways • Access and equity • Foundation skills? <p>(see Training Package Standard 11)</p>	
<p>2. Are the foundation skills explicit and recognisable within the training package and do they reflect and not exceed the foundation skills required in the workplace?</p>	

Quality Report

The following quality report was produced by Bernadette Delaney as part of the quality assurance process.

Section 1 – Cover page

Information required	Detail
Training Package title and code	Information and Communications Technology Training Package (Release 5.0)
Number of new qualifications and their title	Nil
Number of revised qualifications and their titles	6 revised qualifications: ICT20219 Certificate II in Telecommunications Network Build and Operation ICT20319 Certificate II in Telecommunications Technology ICT30419 Certificate III in Telecommunications Network Build and Operation ICT30519 Certificate III in Telecommunications Technology ICT41119 Certificate IV in Telecommunications Network Design ICT41219 Certificate IV in Telecommunications Engineering Technology
Number of new units of competency and their titles	13 new units ICTBWN306 Use radio frequency measuring instruments ICTBWN307 Use optical measuring instruments ICTCBL248 Install and terminate hard-line coaxial cable ICTCBL331 Conduct basic identification and fault finding within cabling networks and customer equipment ICTCBL332 Locate, identify and rectify copper cable faults ICTDRE308 Install a cable broadband multi-dwelling unit system ICTTEN210 Install underground telecommunications infrastructure ICTTEN211 Work effectively in a telecommunications network environment ICTTEN315 Determine and apply technologies within a telecommunications system ICTTEN316 Conduct basic tests and analyses of telecommunications copper cabling ICTTEN317 Locate, identify and rectify telecommunications network faults ICTTEN435 Solve electrical-based telecommunications circuitry and cabling problems. ICTWOR308 Provide customer service to telecommunications customers
Number of revised units of competency and their titles	42 amended units ICTBWN308 Work safely on live optical fibre installations ICTBWN309 Perform tests on optical communication system and components

Information required	Detail
	<p>ICTCBL239 Install customer cable support systems</p> <p>ICTCBL240 Place and secure customer cable</p> <p>ICTCBL241 Terminate metallic conductor customer cable</p> <p>ICTCBL242 Install functional and protective telecommunications earthing system</p> <p>ICTCBL246 Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule</p> <p>ICTCBL247 Install, maintain and modify customer premises communications cabling: ACMA Open Rule</p> <p>ICTCBL249 Haul underground cable for installation and maintenance work</p> <p>ICTCBL250 Haul and fix aerial cable</p> <p>ICTCBL251 Install aerial and underground cable lead-ins</p> <p>ICTCBL252 Joint and terminate coaxial cable</p> <p>ICTCBL253 Construct underground telecommunications infrastructure</p> <p>ICTCBL254 Joint metallic conductor cable in access network</p> <p>ICTCBL322 Install, test and terminate optical fibre cable on customer premises</p> <p>ICTCBL323 Test cables and systems on customer premises</p> <p>ICTCBL324 Cutover new systems and equipment on customer premises</p> <p>ICTCBL325 Maintain cable network</p> <p>ICTCBL326 Cut over metallic conductor cable in the access network</p> <p>ICTCBL329 Install underground cable for communications applications</p> <p>ICTCBL330 Splice and terminate optical fibre cable for telecommunications projects</p> <p>ICTCBL333 Install aerial cable for communications applications</p> <p>ICTCBL334 Install underground enclosures and conduit</p> <p>ICTCBL335 Construct aerial cable supports</p> <p>ICTCBL336 Install and cut over metallic conductor cable to access network cabinet</p> <p>ICTCMP203 Perform restricted customer premises broadband cabling work: ACMA Restricted Rule</p> <p>ICTDRE314 Design communications wiring systems for customer premises</p> <p>ICTOPN404 Test optical communications systems and components</p> <p>ICTOPN405 Install and test a dense wavelength division multiplexing system</p> <p>ICTRFN407 Conduct radio frequency measurements</p> <p>ICTTEN208 Use electrical skills when working with telecommunications networks</p> <p>ICTTEN312 Install telecommunications network equipment</p> <p>ICTTEN313 Work on and resolve recurrent network faults</p> <p>ICTTEN318 Inspect, clean and handle optical fibre cable and connectors</p>

Information required	Detail
	ICTTEN319 Recover customer premises equipment ICTTEN320 Commission an electronic unit ICTTEN321 Maintain an electronic system ICTTEN322 Provide infrastructure for telecommunications network customer equipment ICTTEN432 Identify requirements for customer telecommunications equipment ICTTEN433 Install configuration programs on PC based customer equipment ICTWHS205 Work safely near power infrastructure at a telecommunications workplace ICTWOR202 Work effectively in a digital or telecommunications industry
Confirmation that the panel member is independent of: <ul style="list-style-type: none"> • the Training Package or Training Package components review ('Yes' or 'No') • development and/or validation activities associated with the Case for Endorsement ('Yes' or 'No') • undertaking the Equity and/or Editorial Reports for the training package products that are the subject of this quality report ('Yes' or 'No') 	Yes
Confirmation of the Training Packages or components thereof being compliant with the <i>Standards for Training Packages 2012</i>	Yes
Confirmation of the Training Packages or components thereof being compliant with the <i>Training Package Products Policy</i>	Yes
Confirmation of the Training Packages or components thereof being compliant with the <i>Training Package Development and Endorsement Process Policy</i>	Yes
Panel member's view about whether: <ul style="list-style-type: none"> • the evidence of consultation and validation process being fit for purpose and commensurate with the scope • estimated impact of the proposed changes is sufficient and convincing 	Yes Yes

Information required	Detail
Name of panel member completing Quality Report	Bernadette Delaney
Date of completion of the Quality Report	31 st December, 2018

Section 2 – Compliance with the Standards for Training Packages 2012

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
<p>Standard 1</p> <p>Training Packages consist of the following:</p> <ol style="list-style-type: none"> AISC endorsed components: <ul style="list-style-type: none"> qualifications units of competency assessment requirements (associated with each unit of competency) credit arrangements One or more quality assured companion volumes 	Yes	<p>Standard 1 was met.</p> <p>Units and associated assessment requirements 13 new units 42 amended units</p> <p>Qualifications 6 revised qualifications</p> <p>No credit arrangements</p> <p>One Implementation Guide</p>
<p>Standard 2</p> <p>Training Package developers comply with the <i>Training Package Products Policy</i></p>	Yes	<p>Standard 2 was met.</p> <p>Evidence of compliance from <i>PwC's Skills for Australia</i> with the <i>Training Package Products Policy</i></p> <p>Standard 2 included:</p> <p>Coding of the Training Package</p>

	<p>ICT Information and Communications Technology Training Package Release 5.0 complies with coding and titling.</p> <p>Access and equity</p> <p>The Equity Report (4/9/18) confirmed compliance with respect to access and equity. The quality assurance review noted that the qualifications allowed for flexible options for entrance and in the packaging rules.</p> <p>Advice on access and equity considerations is provided in the draft <i>Implementation Guide Version 5.0</i> p 29.</p> <p>This includes an explanation of access and equity considerations, barriers to access and guidance on reasonable adjustment and how it may be undertaken.</p> <p>The draft training products produced – the qualifications and the unit of competency offerings are flexible enough to meet the diverse needs of both individuals and employers. An important characteristic of this flexibility has been to design training products that suit the dynamic, changing workplaces in the telecommunications sector.</p> <p>Foundation skills</p> <p>Foundation skills to successfully complete the unit requirements are written clearly and listed on each unit. Other Foundation Skills were explicit in the performance criteria.</p> <p>The Foundation Skills were described in detail so they will provide the user with comprehensive information to achieve the performance criteria. RTOs will have clear guidance on Foundation Skills for their learning and assessment strategies.</p> <p>The approach to Foundation Skills in ICT units is also explained in the draft <i>Implementation Guide Version 5.0</i> p.29-30.</p> <p>Qualification coding & titling</p>
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	<p>The qualifications are correctly titled and coded and are AVETMISS compliant. Due to the changes in the qualifications, the code version identifiers are new and two have minor title changes (one word) to reflect the updates.</p> <p>Unit of competency coding & titling</p> <p>Unit codes comply with the policy and AVETMISS standards consisting of a training package identifier (ICT) of three alpha characters, with other alpha characters and numbers. Units to be endorsed or with changed prerequisites have new codes and, where relevant, new titles. Existing titles have remained, where appropriate. Imported units have retained their codes and titles.</p> <p>Qualification Packaging rules</p> <p>The <i>Case for Endorsement</i> (CfE) outlines the consultation and support from industry for the qualification packaging rules. The packaging rules are consistently and clearly presented on the qualifications. Feedback and agreement was provided on the packaging rules during the consultation period, to ensure they met a broad range of jobs in the telecommunications industry. Elective combinations are in labelled groups.</p> <p>Entry requirements</p> <p>Consultations found the telecommunications industry considered the need to have the introduction of entry requirements for the Certificate IV qualifications:</p> <ul style="list-style-type: none"> • ICT41119 Certificate IV in Telecommunications Network Design • ICT41219 Certificate IV in Telecommunications Engineering Technology <p>to strengthen the qualifications and for appropriately trained technicians to meet industry demand. The draft <i>Implementation Guide Version 5.0</i> p26 explains the rationale for these entry requirements. It was noted that the entry requirements are flexible as they offer a range of educational and employment options to the potential entrant.</p> <p>Qualification pathways advice</p> <p>The draft <i>Implementation Guide Version 5.0</i> p.36 provided detailed information on pathways and occupational outcomes as well as apprenticeships and VET in Schools. The qualifications are designed to offer either broad or specialist pathways, which is reflective of the industry needs and work contexts.</p>
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		<p>Mapping</p> <p>Appendix 2 of the draft <i>Implementation Guide Version 5.0</i> p.117 listed qualification and unit mapping to the previous version of the training package. This mapping also included equivalence status and comments on the changes that have occurred. This is useful information for implementing changes.</p>
<p>Standard 3</p> <p>Training Package developers comply with the AISC <i>Training Package Development and Endorsement Process Policy</i></p>	<p>Yes</p>	<p>Standard 3 was met.</p> <p>Evidence of compliance from <i>PwC's Skills for Australia</i> with the <i>Training Package Development and Endorsement Process Policy</i> Standard 3 included:</p> <p>Development process</p> <p>The <i>Case for Change</i> for Project 1F was endorsed by the ICT IRC and submitted to the Australian Industry and Skills Committee (AISC). AISC endorsed the <i>Case for Change</i> on the 17 November 2016. This <i>Case for Change</i> gave solid arguments about the need to undertake this training package work.</p> <p>Consultation</p> <p>Consultation reflected the project scope, with in excess of 177 individuals across Australia consulted. These were the mechanisms for consultation:</p> <ul style="list-style-type: none"> • ICT IRC members (N= 13) contributed guidance and consultation contacts as well as overseeing the project • A Project Working Group (PWG) was set up with industry subject matter experts (N=7) who gave expert opinions and guided the work. The PWG met on 10 occasions, over the period from April - June 2018, to discuss key issues about the qualifications and units of competency. PWG members were further consulted on an ongoing basis through emails and teleconferences • A series of focus groups were conducted in Victoria, New South Wales and Queensland with a total of 31 attendees • There were targeted consultations (N=36) with representatives from industry, employer groups, union, RTO, TAFEs, peak bodies, industry organisations and government

		<ul style="list-style-type: none"> • Draft training products were published on the PwC Skills for Australia website from early May to 1st June 2018 for feedback • State Training Authorities (STAs) were engaged throughout the development process. <p>Validation process Validation focussing on the content and structure of the training products also occurred with industry, STAs and RTO stakeholders</p> <p>Dissenting views expressed during consultations were detailed in the <i>Case for Endorsement</i> (p14) Some changes were made and suggestions on entry requirements and prior experience were addressed as detailed in the <i>Case for Endorsement</i>.</p>
<p>Standard 4</p> <p>Units of competency specify the standards of performance required in the workplace</p>	<p>Yes</p>	<p>Standard 4 was met.</p> <p>Units of competency specified the standards of performance required in the workplace. During the quality assurance process, recommendations were made regarding some units of competency to explicitly describe unit outcomes; identify work outcomes; clearly advise the user about licensing requirements and tighten the language to ensure specificity of the standards of performance required in the workplace.</p> <p>These suggestions were considered thoroughly by <i>PwC's Skills for Australia</i> and changes were made to ensure units of competency clearly expressed the standards required. Editorial Report Addendum 27/11/18 confirms these revisions.</p>
<p>Standard 5</p> <p>The structure of units of competency complies with the unit of competency template</p>	<p>Yes</p>	<p>Standard 5 was met.</p> <p>The Editorial Report (16/7/18) confirmed compliance with Standard 5. The structure of the units complied with the template.</p> <p>After the Editorial Report of 16/7/18, feedback in the quality assurance process resulted in changes to the units of competency to ensure:</p> <ul style="list-style-type: none"> • better user understanding • comprehensive and clear application sections • the clarity and succinctness of performance criteria

		<ul style="list-style-type: none"> • use of clear technical terms • consistency between elements and performance criteria • logical presentation of performance criteria • use of clear and appropriate industry terminology. <p>Editorial Report Addendum (27/11/18) section 3, states issues raised about units in Editorial Report of 16/7/18, have been addressed.</p> <p>Reviews were undertaken of all new units (13) and amended units (42). This included concerns raised in the Editorial Report (16/7/18) for units (ICTTEN211, ICTTEN208, ICTTEN315, ICTTEN316, ICTWHS205, ICTBL246, ICTCBL241 and in the unit ICTTEN317).</p> <p>All recommendations were addressed in detail by a thorough review process implemented by <i>PwC's Skills for Australia</i>.</p>
<p>Standard 6</p> <p>Assessment requirements specify the evidence and required conditions for assessment</p>	<p>Yes</p>	<p>Standard 6 was met.</p> <p>Assessment requirements specified the performance and knowledge evidence and outlined clearly the processes to be demonstrated. Assessment conditions and assessor requirements were clearly stated.</p>
<p>Standard 7</p> <p>Every unit of competency has associated assessment requirements. The structure of assessment requirements complies with the assessment requirements template</p>	<p>Yes</p>	<p>Standard 7 was met.</p> <p>Editorial Report (16/7/18) also confirms compliance.</p> <p>Every unit presented had associated assessment requirements with a consistent style. Assessment requirements followed the required template. Some recommendations were made and accepted for clarity of links between required evidence and the unit of competency as well as additions about linking to the draft <i>Implementation Guide Version 5.0</i> for industry specific requirements for assessors.</p> <p>For the unit <i>ICTCBL330 Splice and terminate optical fibre cable for telecommunications projects</i> there was concern expressed during the Quality Assurance process about stipulating “enterprise certification is first obtained if</p>

		working with live fibre” as part of Performance Evidence as this was adequately covered in the Application section, was a condition and would be gained prior to commencement of the unit. <i>PwC's Skills for Australia</i> presented industry evidence and it was accepted that it was essential for safety requirements also place it in the Performance Evidence.
Standard 8 Qualifications comply with the Australian Qualifications Framework (AQF) specification for that qualification type	Yes	Standard 8 was met. An AQF alignment chart was provided by <i>PwC's Skills for Australia</i> . Qualifications were checked and complied with AQF descriptors of qualification types.
Standard 9 The structure of the information for the Australian Qualifications Framework qualification complies with the qualification template	Yes	Standard 9 was met. Editorial Report (16/7/18) confirmed compliance. The qualifications were checked against the qualification template. The recording of prerequisites within the qualifications was reviewed along with the codes and titles of the units of competency. During the quality assurance process suggestions to review sections on the qualifications (descriptions, licensing, groups and specialisations) were examined and comprehensively addressed, with industry feedback by <i>PwC's Skills for Australia</i> . This resulted in some changes by: <ul style="list-style-type: none"> • reviewing qualification descriptions so that outcomes were explicit and work functions described • stating licensing and regulation information clearly and supporting this information in the draft <i>Implementation Guide Version 5.0</i>. • ensuring instructions and requirements for specialisations were clearly labelled and packaged.
Standard 10 Credit arrangements existing between Training Package qualifications and Higher	NA	None available.

Education qualifications are listed in a format that complies with the credit arrangements template		
<p>Standard 11</p> <p>A quality assured companion volume implementation guide produced by the Training Package developer is available at the time of endorsement and complies with the companion volume implementation guide template.</p>	Yes	<p>Standard 11 was met.</p> <p>A draft quality assured <i>Implementation Guide Version 5.0</i> was available and complied with the template. This Implementation Guide was reviewed.</p> <p>Editorial Report (16/7/18) also confirms compliance.</p>
<p>Standard 12</p> <p>Training Package developers produce other quality assured companion volumes to meet the needs of their stakeholders as required.</p>	NA	<p>Standard 12 was met.</p> <p>No other Companion Volume presented.</p>

Section 3 – Compliance with the training package quality principles

Note: not all training package quality principles might be applicable to every training package or its components. Please provide a supporting statement/evidence of compliance or non-compliance against each principle.

Quality principle 1. Reflect identified workforce outcomes

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance/non-compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Driven by industry's needs	Yes	The <i>Case for Endorsement (CfE)</i> explained the relationship between AISC decisions about commissioning the work through the <i>Case for Change (CfC)</i> approved by AISC in November, 2016 and the work undertaken in this project.

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance/non-compliance with the quality principle <i>Please see examples of evidence in the Training Package Development and Endorsement Process Policy</i>
		<p>The aim of the original, approved project was to review the suitability of a number of telecommunications technology qualifications, within the Information and Communications Technology (ICT) Training Package, to ensure they were fit for purpose and supported skill needs and job outcomes (<i>Case for Change 2016</i>). The objective was to determine the changes or additions that should be made to better meet the needs of industry. Broad industry consultation confirmed the need for the project. In particular, the original industry drivers, as documented in the <i>Case for Change 2016</i>, can be seen as reflected in the revised work and included:</p> <ul style="list-style-type: none"> • the rapid expansion of the NBN workforce • changes in the workforce through subcontracting • concerns about the core and elective units and their suitability • inconsistent entry requirements and distinct purpose of the qualifications. <p>Furthermore, the <i>Case for Endorsement</i> described recent trends in the telecommunications industry that influenced the design and structure of the training products. These factors include technological changes, specific workforce shortages, changes in employment practices, increased demand for telecommunication services, particularly related to the NBN and the regulatory environment. Technical, customer service and safety skills as well as the application of telecommunication principles, have all been considered very important in the development of the qualifications and the units of competency.</p>
Compliant and responds to government policy initiatives Training package component	Yes	The <i>Case for Endorsement</i> outlined how these training products aligned with training package quality principles. There was evidence that the development process had responded to Ministers' policy initiatives from 2015 by:

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance/non-compliance with the quality principle <i>Please see examples of evidence in the Training Package Development and Endorsement Process Policy</i>
<p>responds to the COAG Industry and Skills Council's (CISC) training package-related initiatives or directions, in particular the 2015 training package reforms. Please specify which of the following CISC reforms are relevant to the training product and identify supporting evidence:</p> <ul style="list-style-type: none"> • ensure obsolete and superfluous qualifications are removed from the system • ensure that more information about industry's expectations of training delivery is available to training providers to improve their delivery and to consumers to enable more informed course choices • ensure that the training system better supports individuals to move easily from one related occupation to another • improve the efficiency of the training system by creating units that can be owned and used by multiple industry sectors • foster greater recognition of skill sets 		<ul style="list-style-type: none"> • deleting obsolete ICTBWN305 and ICTTEN305 units and ICT30215 and ICT30315 qualifications and amending a substantial number of units (42) • providing through the <i>draft Implementation Guide Version 5.0</i> information for RTOs about industry expectations of training through describing resources needed, modes of delivery and assessor requirements. Workplace simulation requirements were also described. • providing through the draft Implementation Guide Version 5.0 to potential students (consumers) information about employment roles in the industry, licensing and regulation and pathways • revising qualifications and units of competency to address current industry requirements and portability across job roles • amending qualifications to increase transferability of skills across the industry • ensuring packaging rules include the flexibility to select units from a range of specialisations as well as other training packages • outlining qualification pathways to ensure better recognition in the VET system and industry sector • providing ICT units that are used across the telecommunications industry.

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance/non-compliance with the quality principle <i>Please see examples of evidence in the Training Package Development and Endorsement Process Policy</i>
Reflect contemporary work organisation and job profiles incorporating a future orientation	Yes	Both new and amended units and new qualifications have been based on extensive consultation to ensure they are addressing both immediate and future needs in the telecommunications industry(CfE). Consultation structures through the Industry Reference Group, the Project Working Group, targeted consultations, workshops and use of the project website were very thorough. Consultation methods and the range and number of responses from stakeholders attest to a solid approach for the identification of current and future training needs.

Quality principle 2: Support portability of skills and competencies including reflecting licensing and regulatory requirements

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle <i>Please see examples of evidence in the Training Package Development and Endorsement Process Policy</i>
Support movement of skills within and across organisations and sectors	Yes	The units and qualifications have been designed or amended to suit a range of employment outcomes in the telecommunications industry and support transferable skills across these sectors. Large and medium size enterprises and the need for different skills have been considered (CfE, section 3). Qualifications' packaging rules have been designed to be flexible as to allow the importation of units of competency from other training packages, or units of competency from other qualifications within the ICT Training Package.

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Promote national and international portability	Yes	The training products will provide opportunities across multiple industries to reskill or upskill and respond to industry demand. Qualification packaging rules are flexible, offer wide elective choice and provide specialisations. These measures will assist national portability by allowing responses to different telecommunications contexts across Australia.
Reflect regulatory requirements and licensing	Yes	Licensing is mentioned in some units and qualifications, where applicable, and there is a relevant section in the draft <i>Implementation Guide Version 5.0</i> . Telecommunication units that are subject to Australian Communications and Media Authority (ACMA) requirements are specified within the draft <i>Implementation Guide Version 5.0</i> . Portability of skills and units were considered in light of ACMA approved regulatory requirements for cabler registrations (CfE, section 7.4).

Quality principle 3: Reflect national agreement about the core transferable skills and core job-specific skills required for job roles as identified by industry

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Reflect national consensus	Yes	The consultations conducted at all stages involved focussing on a national consensus from industry and other stakeholders such as STAs and RTOs and industry associations.

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Recognise convergence and connectivity of skills	Yes	ICT units demonstrate the convergence of skills across the broad telecommunications industry . Elective units are offered from a range of other training packages.

Quality principle 4: Be flexible to meet the diversity of individual and employer needs including the capacity to adapt to changing job roles and workplaces

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Meet the diversity of individual and employer needs	Yes	<p>Diversity of needs</p> <p>There was a clear link with this project and the <i>Case for Change, 2016</i> as the impetus for reviewing and developing these training products was specifically to meet the rapid changes in the structure of the telecommunications industry and to ensure qualifications and units of competency were designed to reflect industry training needs and individual learner requirements. The scope and findings of the consultations show the effort involved in identifying the diverse needs in this complex and changing industry sector (Appendix A,B, CfE).</p> <p>The <i>Case for Endorsement (CfE)</i> summarised the main themes that were addressed to meet diverse needs:</p> <ul style="list-style-type: none"> • <i>modifying core units across Certificate II to Certificate IV qualifications;</i> • <i>streamlining Certificate III qualifications;</i>

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
		<ul style="list-style-type: none"> • <i>introducing entry requirements into Certificate IV qualifications; and</i> • <i>reviewing the electives for relevance</i> (section 3.1, p10) <p>Qualifications were reviewed with these aims in mind. Units of competency were amended to ensure both industry needs and workforce skill requirements were addressed.</p> <p>In this project, the review of the qualifications resulted in 6 new non-equivalent qualifications, which also shows the rapid changes in this industry.</p> <p>Provide flexible qualifications</p> <p>The qualifications electives were arranged to offer a range of choice across telecommunications and specialisations, and to increase the amount of flexibility offered both to students and industry. Electives were grouped to suit different contexts and job roles in the telecommunications industry.</p> <p>The development of the unit <i>ICTWOR308 Provide customer service to telecommunications customers</i> was justified in the <i>Case for Endorsement</i> as “stakeholders strongly supported a customer service unit” p35. Both the Equity Report (4/9/18) and the Equity Report Addendum 27/11/18 showed the importance of this unit covering customer service in a technical context.</p>
Support equitable access and progression of learners	Yes	Multiple Entry & Exit Points

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
		<p>The Equity Report 4/9/18 identifies that there are multiple exit and entry points to qualifications with lower level qualifications clearly leading to higher level qualifications.</p> <p>The Equity Report 4/9/18 confirms that the “<i>entry requirements for the Certificate IV qualifications have been justified in the Case for Endorsement.</i>”</p> <p>Access is supported by making entry requirements explicit for the user, when relevant. Entry requirements are only included in the two Certificate IV qualifications, when safety and high risk work is involved. As the entry requirements offer a broad range of options related to qualifications and work experience, they allow for a variety of access pathways and flexibility to enter these qualifications.</p> <p>Use of prerequisites</p> <p>Both the EPuity Report 4/9/18 and Equity Report Addendum 27/11/18 explain the rationale for prerequisites.</p> <p>In the <i>Case for Endorsement Appendix B- Detailed information on feedback received in consultation</i> the reasons for prerequisites are explained. The majority of units (No=41) presented had no prerequisites.</p> <p>There is only one newly developed unit (ICTTEN435 Solve electrical-based telecommunications circuitry and cabling problems) with a prerequisite (ICTTEN208 Use electrical skills when working with telecommunications networks).</p>

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
		<p>With the amended units of competency, prerequisites were added to meet the increased demands of optical test equipment (ICTOPN404), to provide flexible pathways to cabling registration and to ensure health and safety are addressed (ICTCBL247 and ICTCBL323).</p> <p>During the QA process the rationale from industry for the inclusion of prerequisites was confirmed with <i>PwC's Skills for Australia</i> who s <i>“the Telecommunications Industry Stakeholders were very vocal in ensuring prerequisites such as Workplace and Occupational Health and Safety (WHS/OHS) and Electrical Skills, was a priority in ensuring workers work in safe environment.”</i> This industry is subjected to legislation and regulation which have been balanced with access and progression of learners.</p>

Quality principle 5: Facilitate recognition of an individual’s skills and knowledge and support movement between the school, vocational education and higher education sectors

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Support learner transition between education sectors	Yes	<p>VET in school's qualifications are recommended in the draft <i>Implementation Guide 5.0 p33</i> and include <i>ICT20319 Certificate II in Telecommunications Technology</i>. On both the qualification and in the draft <i>Implementation Guide 5.0</i> there are instructions about the delivery to secondary students. In particular, it is made very clear to RTOs that high risk and licensing units are not suitable for VET in school's programs.</p> <p>There are no credit arrangements with higher education which is consistent with the nature of the qualifications being submitted for endorsement, and the fact that their AQF levels are only level 2, 3 and 4.</p>

Quality principle 6: Support interpretation by training providers and others through the use of simple, concise language and clear articulation of assessment requirements

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Support implementation across a range of settings	Yes	Industry advice about delivery is provided in the draft <i>Implementation Guide Version 5.0</i> .
Support sound assessment practice	Yes	Assessment requirements are based on sound consultation, of the demanding technical skills and knowledge requirements in this industry. There is clear advice about assessor industry requirements as well as conducting assessment in simulated environments.

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Support implementation	Yes	The draft <i>Implementation Guide Version 5.0.</i> is appropriately set out and provides advice about implementation.

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