



Skills for the Polymer Industry: Case for Endorsement

PMB Plastics, Rubber and Cablemaking
Training Package Release 2.0
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This Case for Endorsement has been prepared on behalf of the Process Manufacturing, Recreational Vehicle and Laboratory (PMRVL) Industry Reference Committee (IRC) for the Australian Industry and Skills Committee (AISC).

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A. Administrative details of the Case for Endorsement

The Process Manufacturing, Recreational Vehicle and Laboratory (PMRVL) Industry Reference Committee (IRC) is presenting this Case for Endorsement.

IBSA Manufacturing, a Skills Service Organisation (SSO), is submitting this Case for Endorsement on behalf of the PMRVL IRC, in response to activity order IBSA/TPD/2018–19/001.

The following provides a summary of extensions:

Date	Description
29 May 2019	Due date extended to 31 December 2019
23 December 2019	Due date extended to 29 May 2020
4 June 2020	Due date extended to 31 August 2020

B. Description of work and request for approval

Summary of components

See Appendix B for a full list of components associated with this submission.

- 4 revised qualifications
- 1 deleted qualification
- 126 revised units of competency
- 2 new units of competency
- 52 deleted units of competency

Summary of work, changes and industry benefits

The primary focus of work has been to update the PMB Plastics, Rubber and Cablemaking Training Package qualifications and units of competency to reflect current industry best practice, improve relevance and reduce duplication across units.

Priorities for industry as expressed in the Case for Change related to the need for training package content to:

- better reflect changes in industry practices
- review and reduce prerequisites
- investigate the application of streams in qualifications to ensure learners develop the relevant technical skills and knowledge
- induce a desired increase in participation and completion rates
- fuel the re-emergence of a body of graduates with contemporary, work-ready skills
- ensure the alignment of unit content with the *Standards for Training Packages 2012* and *Training Package Products Policy 2019* (as these components have not been reviewed since 2010).

Without this major revision, stakeholders believe that the training package and its qualifications will become obsolete and lose industry support (more so than has already occurred). However, the chemicals and plastics industry is the second largest manufacturing industry in Australia and has a growing workforce. Therefore, supporting learners and industry through the delivery of refreshed industry-led and industry-endorsed qualifications is of critical importance.

The existing components have been reviewed for both coverage and relevance, with the result that qualifications have been streamlined, with clearer and specialised pathways within the qualifications. Units have also been updated with clear performance standards to ensure that contextualisation in the workplace is possible. This should enable a greater number of enrolments for on-the-job, off-the-job, or blended training to occur, and for workplaces to know that the training outcomes are immediately relevant to their operations.

During the drafting process it also became apparent that seven units coded 200 and 300 relating to the same product, process or equipment type were not sufficiently differentiated. Work has been undertaken to make the differentiation clearer.

A large number of units were also identified by the TAC as being obsolete and have been removed, resulting in a more relevant set of unit choices under each qualification. Conversely, some units initially earmarked for deletion were further examined and reinstated, due to proven ongoing relevance to certain niche parts of the industry. See Appendix B for the complete list of units to be deleted.

Alongside the subject- and industry-specific objectives, the work has involved a range of changes to support improved compliance with the *Standards for Training Packages 2012*, including the COAG Industry Skills Council (CISC) reforms to training packages, and the *Training Package Products Policy 2019*. Opportunities to respond to CISC reforms were proactively identified and tested through consultation. This resulted in:

- the removal of an obsolete qualification (*PMB60116 Advanced Diploma of Polymer Technology*) due to a lack of workplace relevance
- the overhaul and streamlining of another four qualifications (*PMB20116 Certificate II in Polymer Processing*, *PMB30116 Certificate III in Polymer Processing*, *PMB40116 Certificate IV in Polymer Technology* and *PMB50116 Diploma of Polymer Technology*)
- the merging, deletion and revision of units of competency to better support industry (from 178 PMB-coded units of competency in Release 1.0 down to 128 in Release 2.0).

As a result of the work above, there will be a number of key benefits for industry across all sectors:

- qualifications and units of competency better reflect current industry needs
- units of competency are clearer, more easily contextualised and provide a more robust framework for training and assessment
- training package components now align with the current *Standards for Training Packages 2012* and *Training Package Products Policy 2019*, which supports RTOs in planning and delivering the qualifications.

This Case for Endorsement is designed to support the PMRVL IRC's request for the Australian Industry and Skill Council's (AISC) endorsement of PMB Plastics, Rubber and CABLEMAKING Training Package Release 2.0.

C. Evidence of industry support

Written evidence of support

A fully constituted IRC approved the draft components for submission to the AISC for endorsement. A letter of support from the IRC Chair appears as Appendix C.

Project methodology, research and consultation

The PMRVL IRC has directly overseen the development process for the Skills for the Polymer Industry Project, in large part due to its membership having direct overlap with the Technical Advisory Committee (TAC). Consultation activities throughout the project have been commensurate with the scope of the project.

The original scope of work approved by the AISC identified the following for review:

- 5 qualifications
- 178 associated units of competency.

Qualifications

A search of the National Register of VET (training.gov.au) shows a prolonged period of no Registered Training Organisations (RTOs) having *PMB60116 Advanced Diploma of Polymer Technology* on scope. Further investigation with the TAC and stakeholders confirmed that this qualification held little industry relevance and they recommended its removal from the training package.

The Certificates II, III and IV and the Diploma have been reworked to allow strong pathways through the qualifications, a move recommended and supported by the TAC and stakeholders.

Strong feedback was also received around the structure of the qualifications, resulting in the packaging being arranged in such a way that learners and workplaces can be steered into specialisations that provide the fundamental skills and knowledge required for the job role.

Units of competency

Feedback was very clear around removing superfluous information (such as definitions in the Range of Conditions and repetitive information in the Assessment Requirements) as well as improving clarity for better-defined units that capture the competency requirements, and strengthen unit intent. Changes to elements and performance criteria and the inclusion of clear performance standards provide the opportunity to contextualise units to meet the needs of individual workplaces while still enforcing a wider industry standard of competence.

The TAC also identified 52 units as no longer having industry relevance, and these have been marked for deletion from the training package. A full list is contained in Appendix B. These deletions were the result of extensive industry consultation, both directly between IBSA Manufacturing and via TAC members' individual consultation efforts and industry knowledge.

Technical advisory committee

A TAC was established to provide specific subject-matter advice and technical expertise for the development and review of the training package components. The TAC was made up of industry – representing the broad range of users – and RTO representatives.

TAC members were actively engaged throughout the project and met several times, in person and by tele or video conference, to discuss draft documents, consider issues presented by stakeholders and through public consultation, and to provide expert advice. Eleven meetings were held as follows:

- 28 August 2018 (in-person meeting, NSW)
- 21 November 2018 (teleconference)
- 27 November 2018 (teleconference)
- 5 March 2019 (teleconference)
- 5 April 2019 (teleconference)
- 3 February 2020 (in-person meeting, NSW)
- 9 March 2020 (video conference via Zoom)
- 23 March 2020 (video conference via Zoom)
- 2 June 2020 (video conference via Zoom)
- 18 June 2020 (video conference via Zoom)
- 16 July 2020 (video conference via Zoom)

A list of TAC members appears as Appendix D.

Public consultation

IBSA Manufacturing has followed its five-phase development model, which supports the development of two drafts and two rounds of public consultation.

Details about the project have been made available on the IBSA Manufacturing website at <https://ibsa.org.au/consultation-project/polymer-project/> for the life of the project.

There was significant consultation undertaken before draft 1 was developed. An industry survey was developed specifically for those in the plastics pipes industry. The survey obtained stakeholder feedback on:

- the job roles of people involved in plastic pipeline design, welding and installation
- the key tasks performed in the workplace and the skills and knowledge required to complete the tasks competently
- whether skills and knowledge have changed over time
- the amount of evidence industry would want to see to know that a person is competent and ready to perform in the workplace.

Respondents to the survey are listed in Appendix E. This information was used to inform the development of the units.

Throughout the project IBSA Manufacturing undertook broader consultation with industry through a number of site visits and meetings with stakeholders, across a number of jurisdictions. The purpose of the meetings was to collect industry intelligence to inform training package development work. IBSA met with the Queensland Plastics Industry Training Committee (QPITC) on several occasions to obtain their feedback on how the majority of units and qualifications should be developed. Appendix E lists stakeholders who were directly consulted about the project.

There were also two rounds of public consultation where draft components were available for review and comment via the IBSA Manufacturing website. More than 900 stakeholders were alerted to the availability of the draft content for review and given the opportunity to provide feedback.

During the consultation period the project web page had:

- 217 discrete page views during Round 1 public consultation
- 122 newsletter views during Round 1 public consultation
- 83 discrete page views during Round 2 public consultation
- 121 newsletter views during Round 2 public consultation
- 87 discrete views in between consultation rounds.

Feedback received during public consultations was tabled in an Issues Register and considered by the TAC.

Appendix E lists those organisations and others who have provided feedback.

Specific issues addressed through consultation

During the project, the following key issues were raised and addressed in consultation with the TAC and the IRC:

Issue	How addressed by industry
Qualifications for review and deletion	<ul style="list-style-type: none"> • A proposal was made to remove Certificate II in Polymer Processing from the training package. However, feedback at Draft 1 suggested there was still some value to the industry in retaining this qualification. • Industry feedback agreed with the proposal to remove the Advanced Diploma of Polymer Technology from the training package. It is not delivered, and the skills and knowledge covered were deemed not relevant to the industry.

Issue	How addressed by industry
Qualification packaging	<ul style="list-style-type: none"> Specialisations have been incorporated in response to industry requirement that graduates have skills and knowledge in specialist areas, including blow moulding, blown film, injection moulding, polyurethane, extrusion, conveyor belt maintenance and repair, conveyor belt manufacture, plastic fabrication, composites, rotational moulding and rubber lining. Wide support from industry for this change has been received. Units listed in the specialisations are mandatory to ensure technical components required for the job role are selected. The exceptions are blow moulding and conveyor maintenance and repair, which have some flexibility in unit selection to reflect the different applications. The core of Certificates III and IV has been reduced to 1 unit, and flexibility has been provided in Group A to recognise the different pathways a learner may enter and progress through the qualifications.
Differences between 200- and 300-coded units relating to same process or equipment operation	<ul style="list-style-type: none"> Units coded 200 and 300 relating to the same product, process or equipment type were not sufficiently differentiated, resulting in a review to more clearly show the different levels of skills and knowledge required. Language was standardised across units where possible. For example, 300-coded units are operating, controlling and optimising the process and equipment. There is also an expectation that learners will attempt to solve issues and monitor their resolution.
Insufficient clarity across elements and assessment requirements	<ul style="list-style-type: none"> It was identified that the performance evidence and knowledge evidence items were often a repeat of, or included content <u>not</u> covered in, the performance criteria. Language in the performance criteria and assessment requirements was updated and the changes were agreed to by the TAC.
References to routine faults or problems	<ul style="list-style-type: none"> The language used to reference problem-solving was inconsistent and did not fit the full range of coverage needed. The TAC introduced the phrase 'process control variances' to cover the full range of issues that a learner would need to be able to address
Range of Conditions field inconsistent and incorrect	<ul style="list-style-type: none"> These sections were reviewed across all units, with the assessment that they were generically used, with some inclusion of incorrect or irrelevant content. The Range of Conditions field was removed, with relevant content merged into the assessment requirements of the relevant units or the Companion Volume Implementation Guide, Release 2.0, as relevant.
Lack of performance standards	<ul style="list-style-type: none"> The volume of evidence and ability to contextualise it to individual workplace standards or needs was lacking throughout the performance criteria and was poorly defined in the assessment requirements. This has now been addressed. Performance criteria were modified where relevant to allow for workplace contextualisation and clear standards. The volume of evidence required has therefore been made clearer by being relevant to contextualised competency in the workplace.

Issue	How addressed by industry
Foundation skills	<ul style="list-style-type: none"> Foundation skills that were not explicit within the performance criteria have been added to the units, as well as the statement: <i>Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.</i>
Prerequisites	<ul style="list-style-type: none"> The TAC reviewed all prerequisites and agreed their inclusion presented a barrier to enrolments and course design. As a result, prerequisites are now only present in a select number of units, usually associated with units at Diploma-level and specified only where absolutely necessary.
Proposed new units	<ul style="list-style-type: none"> Two new units have been developed: <ul style="list-style-type: none"> <i>PMBPROD243E Cut rubber materials.</i> This unit was developed in response to industry feedback that the current ‘cutting’ unit did not adequately meet the nuances of rubber cutting in particular, which are different to those relevant to plastics cutting. <i>PMBTECH407E Produce composite products using cored-laminate techniques.</i> This unit was developed to provide fundamental skills and knowledge for the production of cored-laminate composite (sandwich-structured) products using specialised materials in a general industry application. Upon further analysis the TAC identified existing units could be imported to reduce duplication and proliferation as well as support the Ministers’ priorities. Due to a request to develop some new units being received very late in the project, feedback has been added to the Issues Register for future consideration in Release 3.0.
General language and representation of processes	<ul style="list-style-type: none"> Feedback was received that in some cases units did not reflect closely enough the nuances of the skills, knowledge and processes. The TAC reviewed units throughout the development process, and changes and corrections have been carefully considered and implemented where relevant.
General, minor tweaks	<ul style="list-style-type: none"> Throughout the project feedback on individual units was received that highlighted minor but important tweaks to wording. In all cases these have been considered by the TAC and implemented accordingly.

While undertaking this work, IBSA Manufacturing took a continuous improvement approach to ensure alignment of the training package with best practice. This included:

- ensuring units aligned to the *Standards for Training Packages 2012* template, including updating units to remove the Range of Conditions where not appropriate and revise assessment requirements
- reviewing qualifications to ensure the packaging rules of qualifications aligned with the current and future jobs roles and Australian Qualifications Framework (AQF) specifications
- reviewing unit prerequisites throughout the project and having these assessed for appropriateness by stakeholders
- ensuring unit competencies and assessment requirements met industry needs.

Evidence of broader engagement

In addition to the extensive involvement of TAC members, a range of other stakeholders provided expert input to the project. A list of these stakeholders appears at Appendix E.

All feedback was considered, and competing views were dealt with through consultation. The outcomes were approved in IRC meetings. There are no outstanding issues.

Evidence of engagement with state and territory training authorities

IBSA Manufacturing actively engaged with all State Training Authorities (STAs) throughout the project: providing an initial briefing, maintaining open dialogue and requesting feedback on Draft 1 and Draft 2/Validation draft components. At the conclusion of the project, STAs were given a further opportunity to review the components and provide feedback, as provisioned for in the Training Package Development and Endorsement Process Policy. No objections were noted, and support was received from the STAs of Tasmania, Queensland, Victoria and Western Australia.

Appendix F provides a list of all state and territory stakeholders consulted during the project.

Reports by exception

No cases by exception

D. Industry expectations about training delivery

Training delivery

The PMB Companion Volume Implementation Guide, Release 2.0, includes advice about industry's expectations of training delivery: duration of training, delivery modes and pathways, work-based learning strategies, assessment and information about learner characteristics.

Stakeholders agree that all learners must have access to a real or simulated workplace environment to practise skills development and for assessment.

There were some industry concerns about inconsistency and incompleteness in the assessment requirements. Some requirements have been purposely broadened to provide flexibility and ensure they are suitable to be contextualised to industry requirements. The use of more prescriptive or refined knowledge requirements would mean that the units could not be contextualised by all industry sectors that use them.

Furthermore, some knowledge evidence has been standardised across units and repeated to allow for reinforcement of process requirements in the workplace. This was intentional as historically there have been inconsistencies across the training package in relation to processes, procedures and terminology. This has been clarified for training providers in order to contribute to more consistent outcomes for learners. It also allows for easier identification of opportunities for holistic assessment.

Delivery as an apprenticeship/traineeship

The TAC and the PMRVL IRC and stakeholders agree that the Certificate III in Polymer Processing, Certificate IV in Polymer Technology and Diploma of Polymer Technology are recommended for a traineeship or apprenticeship.

Credit arrangement

Appendix G represents existing credit arrangements for those qualifications referenced in this Case for Endorsement; there are no credit arrangements in place for this training package.

E. Implementation of the new training package

Occupation and licensing requirements

No vocational licensing or certification requirements apply to the units or qualifications included in this submission; all units include the following statement:

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

However, there may be some Australia/New Zealand ISO standards applicable to some of the PMBWELD units. These are listed in general terms in the Companion Volume Implementation Guide. RTOs should check relevant standards in their state at a unit-by-unit level.

Implementation issues and management strategy

- The packaging rules of the revised qualifications have been updated to more closely align with vocational outcomes and to strengthen the AQF alignment. Elective units have been realigned to ensure streamlining of specialisations.
- RTOs will need to review their Training and Assessment Strategy (TAS) documentation to take the revised, new and deleted units into consideration.
- Code changes to all units will result in those code changes needing to be reflected in any training packages that have imported PMB-coded units.

Equivalence

The TAC and the IRC have determined that the revised units remain equivalent to their respective previous releases. Although content has been strengthened to provide clarity on industry requirements, the vocational outcome of the units of competency remains equivalent.

The qualifications have also been deemed equivalent to previous releases. Although in some qualifications core units have changed and specialisations are now included, it was determined the occupational outcome had not changed.

(Stakeholders should note that although the qualifications and units have been updated to align with current job roles, the TAC and the IRC have determined that all revised qualifications and units remain

equivalent to the previous release. Although content has been strengthened to provide clarity on industry requirements, the vocational outcome of the units of competency remains equivalent.)

Prerequisites

The TAC considered the need for prerequisites, which have been used sparingly. The use of prerequisites has been significantly reduced and is now only included in the following units:

Unit of competency	Prerequisite unit(s)
PMBTECH501E Analyse equipment performance	PMBTECH401E Predict polymer properties and characteristics MSMOPS401 Trial new process or product
PMBTECH502E Analyse production trials	MSMOPS401 Trial new process or product
PMBTECH505E Choose polymer materials for an application	PMBTECH401E Predict polymer properties and characteristics
PMBTECH506E Analyse the design of products and tools for polymer injection moulding	MSMOPS401 Trial a new process or product
PMBTECH601E Develop a new product	PMBTECH502E Analyse production trials PMBTECH505E Choose polymer materials for an application
PMBTECH602E Develop a new die or tool	PMBTECH506E Analyse the design of products and tools
PMBTECH603E Design structural or mechanical polymer components	PMBTECH505E Choose polymer materials for an application

F. Quality assurance reports

Independent quality report

All components have been quality-assured by a Training Package Quality Assurance Panel member and the independent quality report is included as Appendix H.

The Companion Volume Implementation Guide has been quality-assured through the IBSA Manufacturing internal process, and through the independent quality process. It is available with this submission and will be available on the VETNet website at: <https://vetnet.education.gov.au> upon endorsement.

Declaration

IBSA Manufacturing, the SSO for the PMRVL IRC, declares that the proposed training package components meet the requirements of the *Standards for Training Packages 2012*, *Training Package Products Policy 2019* and *Training Package Development and Endorsement Process Policy*.

Companion Volume Implementation Guide

IBSA Manufacturing, the SSO for the PMRVL IRC, confirms that the Companion Volume Implementation Guide will be available and has been quality-assured.

Statement of evidence against the Training Package Quality Principles

Training package quality principle	Evidenced by
1. Reflect identified workforce outcomes	<p>Changes made demonstrate a clear link back to relevant AISC decisions in commissioning the work, the <i>IRC Industry Skills Forecast and Proposed Schedule of Work (ISF & PSoW) 2018–2021</i>, National Review Schedule, and the Case for Change (see Appendix A):</p> <ul style="list-style-type: none"> • 2 new units of competency: <ul style="list-style-type: none"> ○ <i>PMBPROD243E Cut rubber materials</i>. This unit was developed in response to industry feedback that the current ‘cutting’ unit did not adequately meet the nuances of rubber cutting in particular, which are different to those relevant to plastics cutting. ○ <i>PMBTECH407E Produce composite products using cored-laminate techniques</i>. This unit covers the production of cored-laminate composite (sandwich-structured) products using specialised materials in a general industry application. • 126 revised units of competency: <ul style="list-style-type: none"> ○ All units were revised to bring them in line with the Standards, and to better meet industry needs. • 4 revised qualifications and 1 deleted qualification: <ul style="list-style-type: none"> ○ All qualifications were carefully reviewed to ensure ongoing relevance to the industry, with the result that the Advanced Diploma was removed, and the remaining 4 qualifications (Certificates II–IV, Diploma) revised. • Training package components are compliant with the <i>Standards for Training Packages 2012</i>, the <i>Training Package Products Policy 2019</i> and the <i>Training Package Development and Endorsement Process Policy</i> • Open and inclusive consultation and validation commensurate with scope and impact has been conducted, as described in this Case for Endorsement.

<p>2. Support portability of skills and competencies including reflecting licensing and regulatory requirements</p>	<ul style="list-style-type: none"> • Packaging rules, the qualifications framework, and pathways support movement within and across sectors, as described in the PMB Companion Volume Implementation Guide (CVIG), Release 2.0. • Development of 2 new units that responds to industry needs. These units have been added as electives to the qualifications: <ul style="list-style-type: none"> ○ <i>PMB20120 Certificate II in Polymer Processing</i> ○ <i>PMB30120 Certificate III in Polymer Processing</i> ○ <i>PMB40120 Certificate IV in Polymer Technology</i> • As previously stated, there is no overarching licensing or regulatory requirement. However, the CVIG outlines some ISO regulations that may apply to certain units. Checking this is up to individual RTOs.
<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"> • Active engagement across industry has been sought to achieve a national consensus about the advice being provided to the AISC, as described in this Case for Endorsement • Best use of cross-industry units was considered when the qualification has revised, as evidenced by: <ul style="list-style-type: none"> ○ the inclusion of 82 imported units ○ consideration of revised MEM Release 2.0 units, which have new prerequisites.
<p>4. Be flexible 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"> • Flexible qualifications provided that enable application in different contexts, evidenced by streamlining and specialisation streams in packaging rules of qualifications • Multiple entry and exit points provided, as described in the PMB Companion Volume Implementation Guide, Release 2.0 • Prerequisite units of competency have been reviewed and no additional prerequisites have been added to existing PMB-coded units. Several prerequisites have been removed as it was demonstrated that the skills and knowledge covered in the prerequisite units were inherent anyway.
<p>5. Facilitate recognition of an individual's skills and knowledge and support movement between the school, vocational education and higher education sectors</p>	<ul style="list-style-type: none"> • Provision of 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, as described in the PMB Companion Volume Implementation Guide, Release 2.0.

<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"> • Industry advice about delivery provided via the PMB Companion Volume Implementation Guide, Release 2.0, which is ready for publication at the same time as the training package. • Units of competency and their associated requirements revised and updated to ensure clarity and consistency of breadth and depth. • Components are compliant with the National Register of VET (training.gov.au) requirements for publication. • Implementation advice provided in the PMB Companion Volume Implementation Guide, Release 2.0, ready for publication at the same time as the training package.
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G. Implementation of the COAG Industry Skills Council reforms to training packages

An endorsement from the AISC for the work presented in this Case for Endorsement will support the COAG Industry Skills Council (CISC) reforms to training packages. Completion of the training package development work outlined in the Case for Change, together with extensive consultation, confirms that this work supports those reforms in the following ways:

Removal of obsolete or superfluous content

- 126 existing units were revised, which included removing unnecessary, repetitive, obsolete and superfluous content
- 1 qualification and 52 units of competency were deleted after the review identified obsolescence and duplication.

Inclusion of advice about industry's expectations of training delivery

- The PMB Companion Volume Implementation Guide, Release 2.0, provides advice on duration of training, modes and pathways of delivery, work-based learning strategies, assessment and learner characteristics.

Support for individuals to move easily from one related occupation to another

- The PMB Plastics, Rubber and Cablemaking Training Package already supports the movement of individuals between related occupations through the use of common core units and substantial use of imported units in qualifications. Work on the draft components submitted for endorsement has continued to expand on that approach.
- Improved qualification design enhances alignment with the AQF.

Creation of units that can be owned and used by multiple industry sectors

- The PMB Plastics, Rubber and Cablemaking Training Package already includes a range of units that are used across multiple sectors, and those units continue to be a feature of the draft qualifications.

Skill set recognition

- This submission does not include skill sets; however, qualification packaging has been redesigned and streamlined to show clear paths for specialisation.

H. A copy of the full content of the proposed training package components

The AISC will be provided with a copy of the developed training package components to be approved under this Case for Endorsement.

Appendixes

Appendix A: Comparison of Case for Change with components submitted for endorsement

Activity order: IBSA/TPD/2018–19/001

Case for Change	This submission
5 revised qualification(s): <ul style="list-style-type: none"> • PMB20116 Certificate II in Polymer Processing • PMB30116 Certificate III in Polymer Processing • PMB40116 Certificate IV in Polymer Technology • PMB50116 Diploma of Polymer Technology • PMB60116 Advanced Diploma of Polymer Technology 	4 updated qualifications to include 118 revised units and 1 new unit: <ul style="list-style-type: none"> • PMB20120 Certificate II in Polymer Processing • PMB30120 Certificate III in Polymer Processing • PMB40120 Certificate IV in Polymer Technology • PMB50120 Diploma of Polymer Technology 1 deleted qualification: <ul style="list-style-type: none"> • PMB60116 Advanced Diploma of Polymer Technology
178 revised units (entire training package)	126 revised units: <ul style="list-style-type: none"> • see Appendix 2 2 new units: <ul style="list-style-type: none"> • PMBPROD243E Cut rubber materials • PMBTECH407E Produce composite products using cored-laminate techniques 52 deleted units: <ul style="list-style-type: none"> • See Appendix 2.
Explore the use of skills sets as specialisation pathways	Specialisations now built into revised qualifications to enable streaming of particular skills

Appendix B: Draft components for endorsement

Qualifications for endorsement

Qualification code	Qualification title
PMB20120	Certificate II in Polymer Processing
PMB30120	Certificate III in Polymer Processing
PMB40120	Certificate IV in Polymer Technology
PMB50120	Diploma of Polymer Technology

Units for endorsement (with prerequisites)

Unit code	Unit title	Prerequisite units
PMBFIN201E	Finish components and products	
PMBFIN202E	Fit attachments and assemble components for customised polymer products	
PMBFIN203E	Rework product imperfections	
PMBFIN205E	Hand decorate products	
PMBHAN103E	Shift materials safely by hand	
PMBPREP201E	Prepare moulds for composites production	
PMBPREP205E	Assemble materials and equipment for production	
PMBPREP206E	Prepare polymer materials to specified formulae	
PMBPREP301E	Set up and prepare for batch production	
PMBPREP303E	Set up equipment for continuous operation	
PMBPREP304E	Set a die for injection moulding production	
PMBPREP305E	Change extrusion die and calibrator	
PMBPROD206E	Operate ancillary equipment	
PMBPROD207E	Operate rubber calendaring equipment	
PMBPROD209E	Operate cable winding equipment	
PMBPROD210E	Operate injection moulding equipment	
PMBPROD213E	Operate polymer extruder	
PMBPROD216E	Operate blown film equipment	
PMBPROD217E	Operate printing equipment	
PMBPROD221E	Operate rotational moulding equipment	
PMBPROD235E	Use materials and process knowledge to complete work operations	

Unit code	Unit title	Prerequisite units
PMBPROD236E	Operate hand-held air or power equipment for production processes	
PMBPROD238E	Perform creel rack operations for belting production	
PMBPROD239E	Build fabric-reinforced conveyor belts	
PMBPROD240E	Cut plastic materials	
PMBPROD241E	Install rubber lining or pulley lagging using lay-up techniques	
PMBPROD242E	Bond polymers to surfaces	
PMBPROD243E	Cut rubber materials	
PMBPROD245E	Fabricate products with rubber or plastics	
PMBPROD246E	Hand mix materials	
PMBPROD247E	Create composite laminates using hand lay-up techniques	
PMBPROD248E	Prepare surfaces for coating	
PMBPROD249E	Apply liquid surface coatings	
PMBPROD251E	Apply gel coat or other polymer surface finish	
PMBPROD252E	Operate polymer compounding equipment	
PMBPROD253E	Operate an internal mill blender	
PMBPROD254E	Operate an open mill blender	
PMBPROD255E	Operate polymer mixing equipment	
PMBPROD261E	Operate continuous vulcanising equipment	
PMBPROD265E	Operate portable vulcanising equipment	
PMBPROD280E	Operate a chopper gun to lay-up composites	
PMBPROD281E	Finish composite products	
PMBPROD282E	Reassemble production mould components	
PMBPROD283E	Demould polymer products	
PMBPROD287E	Weld thermoplastic materials	
PMBPROD293E	Create composites laminates using vacuum-assisted closed-moulding processes	
PMBPROD300E	Produce products	
PMBPROD301E	Draw wire	
PMBPROD302E	Bunch and strand wire	
PMBPROD303E	Produce cable and tape lay-up cables	
PMBPROD304E	Wind up wire or belts	
PMBPROD306E	Prepare and start equipment for production	

Unit code	Unit title	Prerequisite units
PMBPROD307E	Produce calendered rubber or vinyl products	
PMBPROD308E	Take a machine out of production	
PMBPROD310E	Produce injection moulded products	
PMBPROD311E	Produce blow moulded products	
PMBPROD313E	Produce extruded polymer products	
PMBPROD316E	Produce blown film	
PMBPROD321E	Produce rotational moulded products	
PMBPROD325E	Lay-on tyre retreads	
PMBPROD326E	Inspect tyres	
PMBPROD328E	Produce sheet-fed vacuum-formed products	
PMBPROD330E	Make moulds for thermoformed products	
PMBPROD336E	Inspect heavy off-the-road tyres	
PMBPROD337E	Prepare heavy off-the-road tyres for repair	
PMBPROD338E	Repair heavy off-the-road tyres	
PMBPROD339E	Produce steel cord–reinforced conveyor belts	
PMBPROD340E	Cure heavy off-the-road tyre repairs	
PMBPROD341E	Finish heavy off-the-road tyre repairs	
PMBPROD343E	Shut down plant area	
PMBPROD347E	Mould composites products using hand lay-up techniques	
PMBPROD352E	Produce compounded materials	
PMBPROD355E	Make pattern or plug for composites moulds	
PMBPROD356E	Construct moulds for composite products	
PMBPROD357E	Construct jigs and fixtures	
PMBPROD358E	Develop polymer product patterns	
PMBPROD360E	Produce polyurethane products using centrifugal casting	
PMBPROD362E	Produce polyurethane products using gravity casting	
PMBPROD367E	Remove and replace conveyor belts	
PMBPROD368E	Repair conveyor belt carcasses	
PMBPROD369E	Repair conveyor belt covers	
PMBPROD370E	Produce injection blow moulded products	
PMBPROD375E	Vulcanise products using an autoclave	
PMBPROD376E	Splice steel cord conveyor belts	
PMBPROD377E	Splice fabric ply conveyor belts	

Unit code	Unit title	Prerequisite units
PMBPROD378E	Splice solid woven conveyor belts	
PMBPROD380E	Produce composites products using mechanised open mould wet lay-up	
PMBPROD384E	Operate multi-axis router	
PMBPROD385E	Program computer-controlled equipment	
PMBPROD390E	Produce composites using filament winding	
PMBPROD391E	Produce composites using resin infusion	
PMBPROD392E	Produce thermoset composites using pultrusion	
PMBPROD393E	Produce composites using vacuum bagging	
PMBPROD394E	Produce composites using resin transfer moulding	
PMBPROD398E	Produce composites using prepregs	
PMBPROD430E	Trial a new injection moulding die	
PMBPROD431E	Trial a new production mould assembly	
PMBTECH301E	Optimise polymer processing operations	
PMBTECH302E	Modify existing compounds	
PMBTECH303E	Make minor modifications to products	
PMBTECH401E	Predict polymer properties and characteristics	
PMBTECH402E	Set advanced or complex injection moulding dies	
PMBTECH403E	Test thermoset composite laminates and materials	
PMBTECH404E	Mould composites with chemically-resistant or fire-retardant properties	
PMBTECH405E	Repair damaged fibre-composites structures	
PMBTECH406E	Diagnose production equipment problems	
PMBTECH407E	Produce composite products using cored-laminate techniques	
PMBTECH501E	Analyse equipment performance	PMBTECH401E Predict polymer properties and characteristics MSMOPS401 Trial new process or product
PMBTECH502E	Analyse production trials	MSMOPS401 Trial new process or product
PMBTECH505E	Choose polymer materials for an application	PMBTECH401E Predict polymer properties and characteristics
PMBTECH506E	Analyse the design of products and tools for polymer injection moulding	MSMOPS401 Trial new process or product

Unit code	Unit title	Prerequisite units
PMBTECH507E	Develop fibre-composite products using cored-laminate techniques	
PMBTECH508E	Develop a new compound	
PMBTECH509E	Modify an existing product	
PMBTECH601E	Develop a new product	PMBTECH502E Analyse production trials PMBTECH505E Choose polymer materials for an application
PMBTECH602E	Develop a new die or tool	PMBTECH506E Analyse the design of products and tools
PMBTECH603E	Design structural or mechanical polymer components	PMBTECH505E Choose polymer materials for an application
PMBWELD301E	Join polyethylene plastic pipelines using butt welding	
PMBWELD302E	Join polyethylene plastic pipelines using electrofusion welding	
PMBWELD303E	Install polyethylene plastic pipelines for non-pressure drainage	
PMBWELD304E	Design polyethylene plastic pipelines for non-pressure drainage	
PMBWELD305E	Install polyethylene plastic pipelines for pressurised applications	
PMBWELD306E	Design polyethylene plastic pipelines for pressurised applications	
PMBWELD307E	Install plastic pipelines for high temperature applications	
PMBWELD308E	Install PVC plastic pipelines for pressurised applications	
PMBWELD309E	Weld plastics using extrusion techniques	
PMBWELD310E	Design PVC plastic pipelines for pressure applications	
PMBWELD311E	Design plastic pipelines for high temperature and pressure applications	

Qualifications for deletion

Qualification code	Qualification title
PMB60116	Advanced Diploma of Polymer Technology

Units for deletion

Unit code	Unit title	Status
PMBHAN208	Store products	Deleted
PMBPROD211	Operate blow moulding equipment	Deleted

Unit code	Unit title	Status
PMBPROD212	Operate thermoforming equipment	Deleted
PMBPROD229	Operate polystyrene shape moulding equipment	Deleted
PMBPROD233	Operate film conversion equipment	Deleted
PMBPROD237	Splice cables	Deleted
PMBPROD259	Operate granulating equipment	Deleted
PMBPROD262	Operate tyre curing equipment	Deleted
PMBPROD263	Operate retread curing equipment	Deleted
PMBPROD266	Prepare tyre casings for retreading	Deleted
PMBPROD267	Operate steel cutting equipment	Deleted
PMBPROD268	Operate bead coiling equipment	Deleted
PMBPROD270	Operate injection blow moulding equipment	Deleted
PMBPROD284	Operate open flame moulding equipment	Deleted
PMBPROD285	Operate computer controlled equipment	Deleted
PMBPROD290	Operate filament winding equipment	Deleted
PMBPROD291	Operate resin infusion moulding equipment	Deleted
PMBPROD292	Operate pultrusion equipment	Deleted
PMBPROD294	Operate resin transfer moulding equipment	Deleted
PMBPROD295	Operate composite sheeting equipment	Deleted
PMBPROD296	Operate centrifugal casting equipment	Deleted
PMBPROD297	Operate equipment using moulding compounds	Deleted
PMBPROD298	Operate equipment using pre-preg material	Deleted
PMBPROD305	Colour optical fibre	Deleted
PMBPROD309	Produce electroplated products	Deleted
PMBPROD312	Produce continuous thermoforming products	Deleted
PMBPROD314	Produce compression moulded products	Deleted
PMBPROD315	Produce polyurethane foam	Deleted
PMBPROD317	Print and decorate rigid products	Deleted
PMBPROD319	Build up rollers	Deleted
PMBPROD320	Produce foam injected mouldings	Deleted
PMBPROD323	Produce powder coated products	Deleted
PMBPROD324	Inspect tyres for retreading	Deleted
PMBPROD329	Produce polystyrene shape moulded products	Deleted
PMBPROD331	Produce printed and decorated film	Deleted

Unit code	Unit title	Status
PMBPROD332	Produce thermally bent products	Deleted
PMBPROD333	Convert plastic film	Deleted
PMBPROD334	Produce products using twin screw extruders	Deleted
PMBPROD349	Produce liquid surface coated products	Deleted
PMBPROD353	Compound materials using an internal mill blender	Deleted
PMBPROD354	Compound materials using an open mill blender	Deleted
PMBPROD372	Produce fibre optic preforms	Deleted
PMBPROD373	Draw optical fibre	Deleted
PMBPROD387	Produce welded plastics materials	Deleted
PMBPROD395	Produce composite sheet products	Deleted
PMBPROD396	Produce composites using centrifugal casting	Deleted
PMBPROD397	Produce composites using moulding compounds	Deleted
PMBTECH503	Determine rheology and output of plastics materials from processing equipment	Deleted
PMBTECH504	Determine heat transfer loads for processing equipment	Deleted
PMBTECH510	Analyse failure on polymeric materials	Deleted
PMBWASTE101	Collect waste for recycling or safe disposal	Deleted
PMBWASTE302	Coordinate waste disposal	Deleted

Appendix C: Letter of support from the IRC

14 August 2020

Dear Australian Industry and Skills Committee,

As the Chair of the Process Manufacturing, Recreational Vehicles and Laboratory IRC (IRC), I write on behalf of the IRC to support the endorsement of the PMB Plastics, Rubber and Cablemaking Training Package, Release 2.0, as completed under the Activity Order Activity Order IBSA/TPD/2018–19/001.

The new training package components closely reflect current industry practice.

A fully constituted IRC approved the draft components for submission to the Australian Industry and Skills Committee for endorsement.

Regards



Keith Monaghan
Chair, Process Manufacturing, Recreational Vehicle and Laboratory IRC

Appendix D: Technical Advisory Committee Members

The following people formed the Technical Advisory Committee (TAC) for this project:

Name	Organisation
Neil Henderson	Astor Industries
Craig Cook	C&C Plastics & Toolmaking Pty Ltd
Paul Saunders	Curriculum Maintenance Management, Victoria
Han Michel	E-three & Associates Pty Ltd
Keith Monaghan	KM Consulting
Graham Aston	PPC Moulding
Andrew Turner	PPC Moulding/LJ Wallace
Roger Cater	Queensland Plastics Industry Training Committee (QPITC), Plastic and Rubber Technical Education Centre (PARTEC)
Nigel Haywood	Resources Industry Training Council
Laszlo Magyar	Roblan Pty Ltd
Leah Simmons	TAFE NSW

Appendix E: Other participating stakeholders

Plastics Industry Pipe Association members that responded to the survey:

Organisation	Contact	State
AGRU	Peter McLennan	WA
McElroy	Sergio Arellano	WA
Plasson	Justin Lucas	NSW
Plastics Industry Pipe Association	Rodger Connolly	National
Polysmart Pty Ltd	Darren Poynton	National

Stakeholders consulted through site visits and/or meetings (either face-to-face or tele/video conference):

Organisation	Contact	State
Aquatic Leisure Technologies	John Nicopolous	WA
Aquatic Leisure Technologies	Kevin Stone	WA
Aquatic Leisure Technologies	Steve Parry	WA
Association of Rotational Moulders Australasia	Leisa Donlon	National
Astor Industries	Neil Henderson	NSW
Aviation Composites	Lindsay Danes	WA
Azuma Design Pty Ltd	Isaac Yeshouroun	NSW
Boating Industry Association of WA	Fran Pesich	WA
C&C Plastics and Toolmaking	Craig Cook	NSW
Caps and Closures	Eric Poh	Vic.
Composites Australia	Kerryn Caulfield	National
Comtec IPE	Troy Parker	NSW
Dolphin Products	Stefano Stefani	Vic.
Duromer Products	Gary Jennings	NSW
Fenner Dunlop	Vicki Wust	National
Fenner Dunlop	Jason Barber	National
Fenner Dunlop	Adrian Tanner	National
FNQ Plastics	Lesley van Staveren	Qld
Galvano Plastics	Ralph Cable	NSW
Illuminate Group	Rebecca Brown	WA

Organisation	Contact	State
IMCD	Marion Nash	WA
KM Consulting	Keith Monaghan	NSW
L.J. Wallace Group	Andrew Turner	NSW
Moulding Design	Steve Rowling	WA
Plastics Industry Pipes Association	Rodger Connolly	National
Plastool	Gary Down	Vic.
PPC Moulding Services	Graham Aston	NSW
Prestige Fibreglass Products	Steve Adley	WA
Prestige Fibreglass Products	Steve Parry	WA
QMI Solutions	Sam Nicolosi	Qld
Queensland Plastics Industry Training Council and PARTEC	Roger Cater and Terry Smith	Qld
RITC	Nigel Haywood	WA
Riviera Boats	Adam Houlahan	Qld
Roblan	Laszlo Magyar	NSW
Society of Plastics Engineers	Han Michel	National
Swarbrick Yachts	Glenn Swarbrick	WA
TAFE NSW	Leah Simmons	NSW
TAFE NSW	Steven Dawkins	NSW
Thejo Australia	Mark Meredith	WA
Vinyl Council of Australia	Jacinta Spottiswood	National
Vinyl Council of Australia	Sophi MacMillan	National
Wagners	Gavin Wilson	Qld

Stakeholders that provided feedback via public consultation:

Organisation	State	Org. type
Aquatic Leisure Technologies	WA	Employer
Fenner Dunlop	WA	Employer/RTO
LeHunt Consulting Engineers	Vic.	Employer
Col Joy Training Services	Qld	RTO
Womcorp Pty Ltd	Vic.	Employer
WA Department of Training and Workforce Development	WA	Government
Association of Rotational Moulders Australasia	Qld	Industry association

Organisation	State	Org. type
Mouldings Design	WA	Employer
Vinyl Council of Australia	Vic.	Industry association
Rio Tinto	WA	Employer
Plastech Consultancy	Vic.	Employer
North Metropolitan TAFE	WA	RTO
TAFE NSW	NSW	RTO
Queensland Plastics Industry Training Council and PARTEC	Qld	Industry Association/RTO
Curriculum Maintenance Management	Vic.	Government
AiGroup	Qld	Industry association
Wilhelm Morgan Plastics and Metal Manufacturing Education and Training	Vic	Training organisation

Appendix F: State and territory stakeholders consulted

Organisation	Name	State
State and Territory Training Authorities (STAs)		
Australian Capital Territory Government	Patrick Goodarzi	ACT
Australian Capital Territory Government	Tim Sealy	ACT
New South Wales Government	Matthew Hatton	NSW
Northern Territory Government	Dianne Campbell	NT
Northern Territory Government	Dianne Fong	NT
Queensland Government	Chris Buchanski	Qld
Queensland Government	Filippa Ross	Qld
South Australia Government	Juliana Fitzpatrick	SA
Tasmania Government	Michael McGee	Tas.
Tasmania Government	Linda Seaborn	Tas.
Victoria Government	Jacqueline Spencer	Vic.
Western Australia Government	Frances Parnell	WA
Western Australia Government	Suzanne Seinor	WA
Industry Training Advisory Bodies (ITAB)		
Manufacturing Skills Australia (MSA)	Leon Drury	NSW
Industry Skills Advisory Council Northern Territory (ISAC NT)	Alana Treagus	NT
Australian Industry Group (AI Group)	Wayne Lee	Qld
Resources Industry Training Council	Nigel Haywood	WA
Curriculum Maintenance Managers		
Chisholm Institute	Paul Saunders	Vic.

Appendix G: Credit arrangements

Credit arrangements for PMB Plastics, Rubber and Cablemaking Training Package		
Qualification Code	Qualification Title	Credit Arrangement Details
PMB20120	Certificate II in Polymer Processing	At the time of endorsement of this Training Package no national credit arrangements exist.
PMB30120	Certificate III in Polymer Processing	At the time of endorsement of this Training Package no national credit arrangements exist.
PMB40120	Certificate IV in Polymer Technology	At the time of endorsement of this Training Package no national credit arrangements exist.
PMB50120	Diploma of Polymer Technology	At the time of endorsement of this Training Package no national credit arrangements exist.

Appendix H: Quality Assurance report

Quality Report for PMB Plastics, Rubber and Cablemaking Training Package, Release 2.0

Section 1 – Cover page

Information required	Detail
Training Package title and code	PMB Plastics, Rubber and Cablemaking Training Package, Release 2.0
Number of new qualifications and their titles ¹	No new qualifications.
Number of revised qualifications and their titles	<p>4 revised qualifications:</p> <ul style="list-style-type: none"> • PMB20120 Certificate II in Polymer Processing • PMB30120 Certificate III in Polymer Processing • PMB40120 Certificate IV in Polymer Technology • PMB50120 Diploma of Polymer Technology <p>1 qualification proposed for deletion:</p> <ul style="list-style-type: none"> • PMB60116 Diploma of Polymer Technology
Number of new units of competency and their titles	<p>2 new units of competency:</p> <ul style="list-style-type: none"> • PMBPROD243E Cut rubber materials • PMBTECH407E Produce composite products using cored-laminate techniques
Number of revised units of competency and their titles	<p>126 revised units of competency units of competency – refer to Appendix B for a full list of titles.</p> <p>52 units to be deleted – see Appendix B.</p>
<p>Confirmation that the panel member is independent of:</p> <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') 	<p>Jenni Oldfield is an independent Quality Assurance Panel member:</p> <ul style="list-style-type: none"> • Yes, independent of this Training Package review • Yes, independent of development and validation activities associated with the Case for Endorsement • Yes, independent of the Equity and Editorial Reports for this Quality Report

¹ When the number of training products is high the *titles can be presented as an attached list.*

Information required	Detail
Confirmation of the Training Packages or components thereof being compliant with the <i>Standards for Training Packages 2012</i>	The components reviewed meet the requirements of the <i>Standards for Training Packages 2012</i> .
Confirmation of the Training Packages or components thereof being compliant with the <i>Training Package Products Policy</i>	The components reviewed meet the requirements set out in the <i>Training Package Products Policy</i> .
Confirmation of the Training Packages or components thereof being compliant with the <i>Training Package Development and Endorsement Process Policy</i>	The draft components reviewed meet the requirements set out in the <i>Training Package Development and Endorsement Process Policy</i> .
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 	The evidence of consultation and validation on this project has been fit for purpose and commensurate with the scope of the project, and the estimated impact of the proposed changes is sufficient and convincing.
Name of panel member completing Quality Report	Jenni Oldfield, JOConsultancy Quality Assurance Panel member
Date of completion of the Quality Report	7 August 2020

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"> 1. AISC endorsed components: <ul style="list-style-type: none"> • qualifications • units of competency • assessment requirements (associated with each unit of competency) • credit arrangements 2. One or more quality assured companion volumes 	<p>Yes</p>	<p>The components of the <i>PMB Plastics, Rubber and Cablemaking Training Package, Release 2.0</i> submitted for quality review meet the requirements of Standard 1. Components include:</p> <ul style="list-style-type: none"> • 4 revised qualifications: • 2 new units of competency with associated assessment requirements • 126 revised units of competency with associated assessment requirements • credit arrangements (included in the Case for Endorsement). <p>The submission includes the <i>PMB Plastics, Rubber and Cablemaking Training Package Implementation Guide Release 2.0</i>, which has been quality assured.</p>
<p>Standard 2</p> <p>Training Package developers comply with the <i>Training Package Products Policy</i></p>	<p>Yes</p>	<p>IBSA Manufacturing has complied with the <i>Training Package Products Policy</i>.</p> <p>All components are appropriately coded with new, unique codes. Access and equity issues are addressed in the <i>PMB Companion Volume Implementation Guide, Release 2.0</i>. Foundation Skills have been highlighted in the appropriate field in all the units submitted, following advice from industry. Supporting information about Foundation Skills is included in the Implementation Guide, expressed using reference to the Australian Core Skills Framework (ACSF) and Employability Skills.</p> <p>All units have been listed and appropriately mapped in the <i>PMB Companion Volume Implementation Guide Release 2.0</i>.</p>

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 3</p> <p>Training Package developers comply with the AISC <i>Training Package Development and Endorsement Process Policy</i></p>	<p>Yes</p>	<p>IBSA Manufacturing has complied with the AISC <i>Training Package Development and Endorsement Process Policy</i>.</p> <p>The <i>Case for Endorsement</i> outlines the training package development process, ensuring thorough national industry consultation and stakeholder engagement throughout, using a variety of methods:</p> <ul style="list-style-type: none"> • IRC monitoring • specialist technical advice from a Training Advisory Committee (TAC), made up of industry and RTO representatives • an industry survey undertaken before Draft 1 • several site visits and stakeholder meetings • two rounds of public consultation covering six weeks in total, where key industry organisations, State/Territory Training Authorities and Industry Training Advisory Bodies were notified and provided feedback • establishment of a project webpage outlining project activities and including a subscriber alert option. <p>Editorial and Equity Reports have been completed by an IBSA inhouse editor.</p>
<p>Standard 4</p> <p>Units of competency specify the standards of performance required in the workplace</p>	<p>Yes</p>	<p>All 128 units of competency specify the standards of performance required for operators who work in the Plastics, Rubber and Cablemaking sectors.</p>
<p>Standard 5</p> <p>The structure of units of competency complies with the unit of competency template</p>	<p>Yes</p>	<p>All 128 units of competency comply with the unit template.</p>
<p>Standard 6</p> <p>Assessment requirements specify the evidence and required conditions for assessment</p>	<p>Yes</p>	<p>The assessment requirements of all 128 units clearly specify the volume and frequency of tasks that must be performed for assessment, relevant knowledge evidence and clear conditions for assessment. The statements around frequency of tasks to be performed are brief and similar across units, but well supported by industry representatives.</p>

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 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>Every unit has associated assessment requirements, the structure of which complies with the template included in the <i>Standards for Training Packages 2012</i>. This has been confirmed by the Editorial review.</p>
<p>Standard 8</p> <p>Qualifications comply with the Australian Qualifications Framework specification for that qualification type</p>	<p>Yes</p>	<p>The four revised qualifications comply with the AQF specification for that qualification type. The qualifications do include several units coded at AQF levels lower than the target level for the qualification, but the packaging rules work to limit the choice of too many lower level units. Industry agree that the qualifications now match current job roles.</p>
<p>Standard 9</p> <p>The structure of the information for the Australian Qualifications Framework qualification complies with the qualification template</p>	<p>Yes</p>	<p>The structure of the information included in the qualifications, complies with the template included in the <i>Standards for Training Packages 2012</i>.</p>
<p>Standard 10</p> <p>Credit arrangements existing between Training Package qualifications and Higher Education qualifications are listed in a format that complies with the credit arrangements template</p>	<p>Yes</p>	<p>Credit arrangements for the four qualifications are included in a format that complies with the appropriate template, included as an appendix in the <i>Case for Endorsement</i>.</p>
<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>	<p>Yes</p>	<p>The <i>PMB Companion Volume Implementation Guide, Release 2.0</i>, includes information about all components included in this review (covering the whole training package).</p> <p>The mapping clearly identifies changes between Release 1.0 and 2.0 of the training package including the four revised qualifications, 126 revised units of competency, and the addition of two new units.</p> <p>The mapping also clearly identifies one qualification and 52 units proposed for deletion. The Implementation Guide will be available at endorsement for publication on the VETNet site.</p>

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 12</p> <p>Training Package developers produce other quality assured companion volumes to meet the needs of their stakeholders as required.</p>	NA	<p>This review has not included the review of any other companion volumes.</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	<p>The <i>Case for Endorsement</i> includes detail of <i>Activity Order IBSA/TPD/2018–19/001</i>, extended three times, due 31 August 2020.</p> <p>The priorities for the project expressed in the <i>Case for change</i> included the need to:</p> <ul style="list-style-type: none"> • better reflect changes in industry practices • review and reduce pre-requisites • investigate the application of streams in qualifications to ensure learners develop the relevant technical skills and knowledge • induce a desired increase in participation and completion rates • fuel the re-emergence of a body of graduates with contemporary, work-ready skills • ensure the alignment of unit content with the <i>Standards for Training Packages 2012</i> and <i>Training Package Product Policy 2019</i>. <p>Consultation throughout the project has ensured that work has been driven by industry's needs.</p>
<p>Compliant and responds to government policy initiatives</p> <p>Training package component 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 	Yes	<p>The <i>Case for Endorsement</i> provides evidence that the <i>PMB Plastics, Rubber and Cablemaking Training Package, Release 2.0</i> components submitted for endorsement are compliant with both the <i>Training Package Products Policy</i> and the <i>Training Package Development and Endorsement Process Policy</i>, and that the new components:</p> <ul style="list-style-type: none"> • meet industry needs for training • supported by the nature and scope of stakeholder consultation • supported by stakeholders as reflecting contemporary work organisation and job profiles. <p>This quality assurance review determines that the components are compliant with the <i>Standards for Training Packages 2012</i>.</p>

<p>are removed from the system</p> <ul style="list-style-type: none"> • 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 		<p>Evidence that the training package work has responded to CISC's policy initiatives, in particular the 2015 training package reforms, includes:</p> <ul style="list-style-type: none"> • removing obsolete or superfluous content from 126 units • deleting one qualification (which no RTO has on scope of delivery) • deleting 52 units of competency, considered no longer relevant after extensive consultation • the inclusion of industry's expectations of training delivery in the <i>PMB Companion Volume Implementation Guide Release 2.0</i> • support for individuals to move between related occupations through the use of common core units and several imported units • creation of units that can be used across several sectors in the <i>PMB Training Package</i>.
<p>Reflect contemporary work organisation and job profiles incorporating a future orientation</p>	<p>Yes</p>	<p>The <i>Case for Endorsement</i> provides details of an open and inclusive consultation and validation process, commensurate with the scope and impact of the project, including:</p> <ul style="list-style-type: none"> • industry survey • IRC monitoring • specialist technical advice from a large TAC, who met 11 times throughout the project, including 2 face to face meetings before the COVID 19 restrictions were put in place • site visits • two rounds of public consultation, where key industry organisations, State/Territory Training Authorities and Industry Training Advisory Bodies were notified • establishment of a project webpage outlining project activities and including a subscriber alert option (with more than 630 webpage and newsletter views across the project).

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 Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Support movement of skills within and across organisations and sectors	Yes	<p>The <i>PMB Companion Volume Implementation Guide, Release 2.0</i>, provides information about pathways between PMB qualifications, including the Certificate II, which could be delivered in a VET in Schools context, through to the Diploma, which could lead on to higher education qualifications.</p> <p>The Process Manufacturing, Recreational Vehicle and Laboratory (PMRVL) IRC and stakeholders recommend that the PMB30116 Certificate III in Polymer Processing, PMB40116 Certificate IV in Polymer Technology, and PMB50116 Diploma of Polymer Processing can be delivered through a traineeship or apprenticeship pathway.</p>
Promote national and international portability	Yes	<p>The <i>Case for Endorsement</i> includes details of thorough consultations with representatives from all states and territories to support national portability of qualifications. The revised qualifications also make best use of several imported units from MEM Manufacturing and Engineering Training Package, as well as units from MSM, MSS MST, RII and TLI Training Packages.</p>
Reflect regulatory requirements and licensing	Yes	<p>No occupational licensing arrangements cover the roles and tasks covered by PMB training package components. Units and qualifications included in this submission include the following statement:</p> <p><i>No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.</i></p> <p>Several relevant Australian/international standards are listed in the <i>PMB Companion Volume Implementation Guide, Release 2.0</i>.</p>

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	<p>The <i>Case for Endorsement</i> outlines the national consultation and validation process and the organisations and participants involved.</p> <p>The TAC included industry stakeholders and RTOs that use the <i>PMB Plastics, Rubber and Cablemaking Training Package</i>.</p> <p>The number of organisations that participated and the number of stakeholders alerted for project updates demonstrates that IBSA Manufacturing sought, and achieved, a national consensus on the components submitted for endorsement.</p> <p>There are no reports by exception.</p> <p>A letter of support from the IRC is included with the submission.</p>
Recognise convergence and connectivity of skills	Yes	<p>The qualifications have been structured to apply across sectors within the Plastics, Rubber and Cablemaking industry. PMB30116 Certificate III in Polymer Processing and PMB40116 Certificate IV in Polymer Technology have been revised to include optional specialisations across a number of sector areas – these qualifications are held together by common core units.</p> <p>All qualifications include a bank of electives that includes cross-sector and imported and units, and the packaging rules allow for units to be imported from any other training package or accredited course that are relevant to the job role.</p>

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>The revised Certificate III and Certificate IV qualifications include optional specialisations to meet varying needs of industry work in different contexts, including:</p> <ul style="list-style-type: none"> • Blow moulding • Blow film (only Certificate III) • Composites • Conveyor belt maintenance and repair • Conveyor belt manufacture (only Certificate III) • Extrusion • Plastic fabrication • Injection moulding • Polyurethane • Rotational moulding • Rubber lining (only Certificate III) <p>All revised qualifications include long lists of elective units that cover cross-sector job tasks. They also recognise the convergence of skills with Manufacturing and Engineering, and include MEM elective units, as well as units from other training packages to cover a diverse range of individual and employer needs.</p>
Support equitable access and progression of learners	Yes	<p>Multiple entry and exit points to PMB qualifications are described in the <i>PMB Companion Volume Implementation Guide, Release 2.0</i>. No qualifications have entry requirements and credit can be given for units completed in lower level qualifications.</p> <p>The two new units do not include pre-requisites, and several revised units have had pre-requisites removed through this project.</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>Information on career pathways is included in the <i>PMB Companion Volume Implementation Guide Release 2.0</i>, with articulation AQF levels from Certificate II through to Diploma level. The guide notes there are options at Certificate I level in the MSM Manufacturing Training Package that provide a pathway in to the PMB20120 Certificate II in Polymer Processing.</p> <p>There is nothing noted in the <i>PMB Companion Volume Implementation Guide Release 2.0</i> that restricts PMB qualifications from being delivered in a VET in Schools context.</p> <p>The <i>PMB Companion Volume Implementation Guide Release 2.0</i> also notes that higher level PMB qualifications can lead onto higher education programs.</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	<p>Industry advice about delivery is provided in the <i>PMB Companion Volume Implementation Guide Release 2.0</i>, including information about choosing electives and for work in different industry sectors and varying work environments, contextualising units of competency, and developing a Training and Assessment Strategy for different learner groups.</p> <p>Information is also provided to address health and safety, how to deal with access and equity issues, and advice about foundation skills.</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>
Support sound assessment practice	Yes	<p>The units of competency and their associated assessment requirements are clearly written, and the Editorial Report confirms this – this clarity should inform sound assessment practice.</p> <p>The <i>PMB Companion Volume Implementation Guide Release 2.0</i> provides information to guide the assessment process, including workplace assessment, simulated assessment, judging competence, and also about foundation skill levels (ACSF levels) to be targeted in assessment tasks.</p>
Support implementation	Yes	<p>The <i>PMB Companion Volume Implementation Guide Release 2.0</i> also includes a range of information to support implementation, including information about choosing appropriate qualifications, occupational outcomes of qualifications, addressing health and safety in manufacturing, dealing with access and equity issues, advice about foundation skills, ACSF levels for competent learners of each unit, and employability skills summaries for each qualification.</p>