Aerospace Education and Training
Industry Reference Committee

MEA Aeroskills Training Package

Business Case

November 2016

Prepared by

Manufacturing Skills Australia

A. Administrative information

Name of IRC: Aerospace Education and Training IRC

Name of SSO: Manufacturing Skills Australia

This business case set out to examine evidence of the need for an update to a number of components of the MEA Aeroskills Training Package to respond to current regulatory compliance, industry trends and workforce needs in the aerospace industry. It includes a review of the relevant components within the Training Package required to address Civil Aviation Safety Authority (CASA) and the defence sector's licensing and regulatory as well as quality systems requirements.

Subsequently, in the civil aviation area plans for priority training product changes to meet some expected CASA licensing changes did not proceed, as CASA has recently commenced a more comprehensive review of relevant regulatory licensing provisions. This is further discussed in Section C. Outcome of the review.

The proposed components to go forward at this time comprise the following:

- Review of five qualifications
- Review of ten units of competency
- One new unit of competency
- Review of one skill set

See the full list in Appendix A.

Description of scope of work is at Section C below.

B. Methodology for review

Stakeholder consultation

Extensive consultation has been undertaken on business case needs and details with members of the Aerospace Education and Training IRC, both in scheduled IRC meetings and out-of-session discussions.

In addition, a Technical Advisory Committee (TAC) was formed by the IRC and it reviewed details for earlier proposed training product changes to meet expected new CASA requirements for small aircraft licensing (which did not proceed). This is further discussed in Section C. Outcome of the review.

Meeting activities were also held and supplemented by phone interviews and email conversations to provide in-depth industry intelligence on the regulatory/licensing and quality systems compliance, skills needs, workforce directions and industry trends for each project component.

A full list of all stakeholders contacted can be found in Appendix B.

C. Outcome of the review

Imperative for change

The MEA Aeroskills Training Package supports the creation of new and improved career pathways and workforce development opportunities in the aviation industry which is a key national infrastructure industry area, and where adherence to safety and quality systems standards is critical.

Part of the MEA role is to support aviation personnel in accessing nationally approved competency-based training enabling them to meet the stringent aviation safety licensing, regulatory and quality systems requirements. Industry stakeholders work under two regulatory systems, one which applies to the civilian industry and the other which applies to the Australian Defence Force (ADF). Some enterprises work under both systems.

This business case provides evidence of the need to investigate updates to a number of components of the MEA Aeroskills Training Package to address new and updated CASA and ADF licensing and regulatory requirements, and quality systems compliance.

CASA-Related Changes

Aviation is considered a high risk industry. Australia has long held a reputation for providing some of the safest aircraft operations in the world. Under the Civil Aviation Act, CASA's functions include: conducting the safety regulation of civil air operations in Australia, developing and promulgating aviation safety standards, and issuing certificates, licences, registrations to aviation personnel undertaking key safety-related regulatory functions.

The proposed changes to be detailed in this business case were mainly to be a priority response to changes to licensing regulations planned to be mandated by CASA specifically for the general aviation sector of the industry in relation to small aircraft licensing. These changes will not now proceed, as more recently CASA has commenced a comprehensive review of all relevant aircraft maintenance regulatory licensing provisions covered by their regulation (CASR Part 66) for both large/airline aircraft and small aircraft. This review may take up to two years to complete.

The industry had earlier undertaken detailed discussions (with a dedicated TAC) on a proposed specific new qualification for licensing in the small aircraft sector, proposed to be the Diploma of Aeroskills (Mechanical – Small Aircraft). However, agreement proved difficult to reach on the qualification content. Additionally, and importantly, from RTO/CASA Maintenance Training Organisation (MTO) qualification delivery commencement, it would take at least four years for individuals to complete their training and gain a licence, yet CASA's regulatory review is expected to be completed in two years. Although the outcome of the review cannot be predicted, it may result in significant changes to the existing small aircraft licensing regulatory requirements. It was also noted that in the interim, CASA's own pre-existing licensing arrangements (non-CBT) would remain to provide a path to licence for employment on small aircraft. In all the emerging circumstances it seemed most prudent to await the outcome of CASA's regulatory review before considering necessary suitable MEA training product change.

CASA has separately requested the development of an additional unit of competency around aircraft weight control for inclusion in four qualifications. This will ensure that workers have the skills and knowledge to hold a licence to ensure the safe loading of aircraft with both passengers and goods and to manage this within the relevant aircraft's load capacity.

Additionally, an existing unit MEA289 has been revised to make coverage of ADF systems dependent on enterprise need.

Australian Defence Force (ADF) - Related Changes

The ADF operate under a Defence-specific comprehensive regulatory and quality control system for aviation maintenance and repair activities. This regulatory framework applies to Defence personnel as well as Defence contractors and suppliers.

Research has shown that the ADF is the only stakeholder currently using the MEA41115 Certificate IV in Aircraft Life Support and Furnishing. To meet their ongoing requirements Defence has proposed the full review and repackaging of the qualification to ensure that workers have the skills and knowledge required to install, maintain and repair aeronautical life support equipment to Australia's stringent ADF standards. This will result in a new qualification with the proposed title of Certificate IV in Aeronautical Life Support Equipment which will be tailored to the ADF's specific need. There also needs to be a review of three existing units of competency to ensure they meet updated ADF regulatory standards. There are no new units proposed for the qualification.

Additionally, as part of the recent training package streamlining process, the codes have been changed for a number of defence explosive ordnance units of competency that have been imported into the Aeroskills Training Package and it is not known if there have also been any changes to unit content. This business case proposes that five DEF coded units of competency be reviewed to ensure that content of the units has not changed the intent of the units and therefore remain suitable for inclusion in the current four qualifications and one skill set

Once advice is received from the ADF regarding the current codes and confirmation whether or not there has been any content changes, the necessary amendments can proceed.

Scope of work

To address these issues, and ensure the continued regulatory compliance, success and viability of the aerospace industry, the Aerospace Education and Training IRC, through this business case, proposes:

- Full review and restructure of one qualification to align with the requirements of the principle user (ADF) which will result in a new qualification with the title of Certificate IV in Aeronautical Life Support Equipment
- Development of one new unit of competency to meet licencing requirements –
    - MEA731 Perform aircraft weight control activities
- Revision of four qualifications to include the new unit of competency (MEA731) –
    - MEA50415 Diploma of Aviation Maintenance Management (Mechanical)
    - MEA50615 Diploma of Aeronautical Engineering
    - MEA60215 Advanced Diploma of Aviation Maintenance Management (Mechanical)
    - MEA60415 Advanced Diploma of Aeronautical Engineering
- Revision of five units of competency to ensure compliance with updated regulatory standards–
    - MEA356 Maintain light piston engine aircraft pressurisation systems
    - MEA205 Remove and install advanced aircraft instrument system components
    - MEA207 Remove and install aircraft electronic system components

  - MEA211 Inspect, test and troubleshoot advanced aircraft electrical systems and components
  - MEA289 Maintain basic light aircraft avionic systems and components
- Review of five imported units of competency to ensure that they have not changed the intent of the qualification –
  - DEFEO101D Work safely with explosive ordnance
  - DEFEO301D Package ammunition
  - DEFEO302D Unpackage ammunition
  - DEFEO501D Conduct explosive ordnance inspection
  - DEFEO718C Maintain cartridge operated fire extinguisher systems
- Review of one skill set to ensure that it continues to meet the regulatory requirements of the ADF
  - MTA001 Aircraft Egress System Maintenance

D. Estimated impacts of proposed change

Impact of implementing the changes

Impact and benefits associated with changes proposed within this business case:

- Supporting industry to meet CASA and defence licensing, regulatory and quality system requirements through provision and updating of accessible national training products
- Meeting ongoing CASA and defence needs through provision of industry defined and supported national training products
- Strengthened and comprehensive in-depth partnerships and joint work between industry and the vocational education and training sector to meet required outcomes
- Improved career pathways and workforce development opportunities in a key national infrastructure industry area

Impact of not implementing the changes

Impact and risk associated with no change:

- Industry's effective response to high-priority CASA and defence licensing, regulatory and quality system requirements will be seriously jeopardised
- Industry business outcomes and ongoing competitiveness will be at risk
- Continued lack of training and development opportunities for skill growth in a key national infrastructure industry area
- Misalignment of ADF needs and those provided through nationally recognised training products

E. Outstanding issues

An aviation maintenance enterprise proposed minor wording changes to the Required Knowledge and Assessment Requirements for unit *MEA362 Maintain aircraft vapour cycle air conditioning systems*. Additionally, the ADF has raised the need to review unit *MEA320 Test and troubleshoot aircraft hydro-mechanical, gaseous and landing gear systems and components* to meet the ADF

regulatory and quality system standards. These proposals require future action to take the matter to the wider aviation maintenance industry.

No other outstanding issues have been identified to date.

MSA will work with the IRC and the allocated SSO to ensure a smooth transition of work should this business case be approved.

F. Proposed approach and estimated timeframes for undertaking development work

Training package development work will follow the standard stages of: project scoping, technical development, validation, final draft, quality check, validation and endorsement.

The recommended time to complete the work is six months to the time of submission for endorsement.

G. Training product review status

Please see Appendix A.

H. IRC Signoff

This Business Case was approved by:

Russell Burgess, Chair

Date: 29 November, 2016

Appendix A

Schedule of Review of Training Products: 2016-17

SSO Name: Manufacturing Skills Australia

Contact details: Russell Burgess, Chair

Date submitted: 29 November, 2016

Training Package code	Training Package name	Qualification code	Qualification name	Unit code	Unit name	Skill Set code	Skill Set name	Review status	Change required
MEA	Aeroskills	MEA41115	Certificate IV in Aircraft Life Support and Furnishing						3.5
MEA	Aeroskills	MEA50415	Diploma of Aviation Maintenance Management (Mechanical)						3.5
MEA	Aeroskills	MEA50615	Diploma of Aeronautical Engineering						3.5
MEA	Aeroskills	MEA60215	Advanced Diploma of Aviation Maintenance Management (Mechanical)						3.5
MEA	Aeroskills	MEA60415	Advanced Diploma of Aeronautical						3.5

Training Package code	Training Package name	Qualification code	Qualification name	Unit code	Unit name	Skill Set code	Skill Set name	Review status	Change required
			Engineering						
MEA	Aeroskills			MEA731	Perform aircraft weight control activities				New
MEA	Aeroskills			MEA205	Remove and install advanced aircraft instrument system components				3.5
MEA	Aeroskills			MEA207	Remove and install aircraft electronic system components				3.5
MEA	Aeroskills			MEA211	Inspect, test and troubleshoot advanced aircraft electrical systems and components				3.5
MEA	Aeroskills			MEA289	Maintain basic light aircraft avionic systems and components				3.5
MEA	Aeroskills			MEA356	Maintain light piston engine aircraft pressurisation systems				3.5

Training Package code	Training Package name	Qualification code	Qualification name	Unit code	Unit name	Skill Set code	Skill Set name	Review status	Change required
MEA	Aeroskills			DEFEO101D	Work safely with explosive ordnance				3.5
MEA	Aeroskills			DEFE0301D	Package ammunition				3.5
MEA	Aeroskills			DEFE0302D	Unpackage ammunition				3.5
MEA	Aeroskills			DEFE0501D	Conduct explosive ordnance inspection				3.5
MEA	Aeroskills			DEFE0718C	Maintain cartridge operated fire extinguisher systems				3.5
MEA	Aeroskills					MTA001	Aircraft Egress System Maintenance		3.5
					Total qualifications	5			
					Total Units of Competency	11			
					Total Skill Sets	1			

Appendix B

Aerospace Education and Training IRC	
Name	**Organisation**
Russell Burgess (Chair)	Qantas Engineering, Qantas Airways Ltd
Rod Elliot (Deputy Chair)	Hawker Pacific
Stephen Pickard	BAE Systems
Ken Cannane	Aviation Maintenance Repair Overhaul Business Association (AMROBA)
Mike Higgins	Regional Aviation Association of Australia
Paul Baxter	Australian Manufacturing Workers' Union
Gary Stephenson	Raytheon Australia
Lynda Douglas	Directorate of Learning Capability Development, ADF
Matt Murphy	Communication Electrical and Plumbing Union
Stephen Re	Australian Licensed Aircraft Engineers Association
Pieter Van Dijk	Civil Aviation Safety Authority (CASA)
Stephen Dawkins	TAFE NSW / NARTOCOP network

Technical Advisory Committee for new Diploma of Aeroskills (Mechanical – Small Aircraft)	
Name	**Organisation**
Russell Burgess (Chair of IRC/Convenor)	Qantas Engineering, Qantas Airways Ltd
Mike Higgins	Regional Aviation Association of Australia
Stephen Dawkins (with David Duncan)	TAFE NSW / NARTOCOP network
Pieter Van Dijk (with Michael McGill and Craig Johnson)	Civil Aviation Safety Authority (CASA)
Ken Cannane	Aviation Maintenance Repair Overhaul Business Association (AMROBA)
Paul Jones	Aviation Australia / SME

Other stakeholders	
Name	**Organisation**
Les Watts	Les Watts Management and Training Services
Terry Lawler	Industry Skills Advisory Council NT
Bruce Rogers	ATSV
Lee Carter	Department of Education and Training VIC