



**Process Manufacturing, Recreational Vehicle and  
Laboratory Industry Reference Committee**

**MSM Manufacturing Training Package**

# **Business Case**

November 2016

Prepared by  
Manufacturing Skills Australia

## A. Administrative information

**Name of IRC:** Process Manufacturing, Recreational Vehicle and Laboratory IRC

**Name of SSO:** Manufacturing Skills Australia

This business case provides evidence of the need for the development of a Certificate III in Fenestration for inclusion in the MSM Manufacturing Training Package to address current industry trends and workforce needs in the window and door manufacturing sector.

The proposed components comprise the following:

- Development of one new qualification
- Review of 60 existing units of competency to determine suitability for the fenestration industry
- Development of one new skill set to support upskilling of existing workers

See the full list in Appendix A.

Description of scope of work is at Part C below.

## B. Methodology for review

### Stakeholder consultation

Following approval by the IRC, a targeted survey of stakeholders was conducted. This was also accompanied by a series of phone interviews and email conversations to provide industry intelligence on skills needs, workforce directions and industry trends for each project. A full list of all stakeholders/respondents contacted can be found in Appendix B.

## C. Outcome of the review

### Imperative for change

The Australian window and door manufacturing industry collectively contributes close to \$5 billion to GDP annually and employs approximately 18,000 people. In recent years Australia's glazing and window manufacturing industries have invested heavily in new plant, equipment, projects and staff training in response to government and market demands for more sustainable buildings. It now has the capacity to not only compete with imports but to locally produce world-class high technology energy efficient window products.

The target employees for the Certificate III in Fenestration are those people that fabricate windows and doors. A Certificate III in Fenestration would allow for greater unit choice and flexibility to suit the work that is being done in the industry while providing a qualification that recognises the skills that are required by the workers. The lack of a qualification has led to a shortage of trained fabricators in the window and door industry.

Fabrication of windows and doors is not done on a production line. Windows and doors differ greatly in their specifications and requirements as there are a number of requirements including ensuring that they are made to AS 2047 Windows and glazed external doors in buildings standards.

These are some of the skills that have been identified by the industry:

#### **General Skills**

- Working safely
- Workplace communication and working in a team
- Sustainable work practices
- Clean equipment and tools
- Minor repairs
- Manual Handling

#### **Lean manufacturing concepts**

- Organised workspace
- Standardised work process
- Service level agreements
- Systematic structures

#### **Industry specific skills**

- Interpretation of technical drawings
- Use of tools
- Sash fabrication in materials: aluminium; timber; uPVC; fibreglass; composite materials as appropriate for the workplace.
- Glass handling
- Glass cutting and / or processing
- Selection of materials required based on performance requirements for energy, bushfires, acoustic attenuation etc.
- Selection and use of appropriate sealants; seals; gaskets
- Safety glass identification
- Mitre cuts / square cuts
- Measuring
- Tolerances

### **Scope of work**

To address these issues, and ensure the continued success and viability of the window and door manufacturing sector, the Process Manufacturing, Recreational Vehicles and Laboratory IRC, through this business case, proposes:

- Development of a new qualification – Certificate III in Fenestration - to address the skill needs of workers in the window and door manufacturing sector
- Development of a new skill set to address the skill needs of existing workers in the window and door manufacturing sector

## **D. Estimated impacts of proposed change**

### **Impact of implementing the changes**

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

- Creation of industry defined and supported national training products
- New platforms for professional development to build sustained talent and productivity improvements within the window and door manufacturing sector
- Creation of improved career pathways and workforce development opportunities

- Improved attraction and retention within the sector through the availability of a specialist fenestration qualification within the Manufacturing Training Package aligned to specialist job roles
- Improved consistency and currency of skills for the specialised window and door manufacturing sector
- Improved product quality and services delivery as a result of having appropriately skilled workers
- Strengthened partnerships between industry and the vocational education and training sector

## **Impact of not implementing the changes**

Impact and risk associated with no change:

- Sustained shortages of skills nationally in a growing specialist occupational area
- Inability of the window and door sector to operate at a globally competitive standard due to a lack of skills in a key occupational area
- Significant recruitment costs and loss of productivity for employers as a result of failed recruitment efforts
- Significant loss of quality within the sector as a result of poorly/incorrectly skilled workers
- Continued lack of training and ongoing development opportunities for skill growth in a key business area
- Inability of Australian window and door manufacturers to grow their talent internally using nationally recognised, portable qualifications

## **E. Outstanding issues**

No 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 twelve 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:

Samantha Read, Chair

Date: 28 November, 2016

## Appendix A

### Schedule of Review of Training Products: 2016-17

**SSO Name:** Manufacturing Skills Australia

**Contact details:** Samantha Read, Chair

**Date submitted:** 28 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
MSM	Manufacturing	MSM30317	Certificate III in Fenestration						new
						MSMSS00015	Fenestration		new
				MSMENV272	Participate in environmentally sustainable work practices				3.5
				MSMWHS200	Work safely				3.5
				MSMSUP101	Clean workplace or equipment				3.5
				MSMSUP102	Communicate in the workplace				3.5
				MSMSUP106	Work in a team				3.5
				MSMSUP210	Process and record information				3.5
				MSMSUP240	Undertake minor maintenance				3.5

				MSMSUP300	Identify and apply process improvements				3.5
				MSMSUP382	Provide coaching/mentoring in the workplace				3.5
				MSMSUP390	Use structured problem-solving tools				3.5
				MSMOPS101	Make measurements				3.5
				MSMOPS200	Operate equipment				3.5
				MSFFF2004	Prepare surfaces for finishing				3.5
				MSFFM2006	Hand make timber joints				3.5
				MSFGG2001	Use glass and glazing sector hand and power tools				3.5
				MSFGG2002	Use, handle and store glass and glazing products and consumables				3.5
				MSFGG2005	Apply basic glass handling				3.5
				MSFGG2009	Fabricate and assemble frames				3.5
				MSFGG3002	Assess glass and glazing requirements				3.5
				MSFGG3020	Use static machines for aluminium and unplasticised polyvinyl chloride (uPVC) fabrication				3.5

				MSS402021	Apply Just in Time procedures				3.5
				MSS402040	Apply 5S procedures				3.5
				MSS402051	Apply quality standards				3.5
				MEM03001B	Perform manual production assembly				3.5
				MEM03002B	Perform precision assembly				3.5
				MEM03006B	Set assembly stations				3.5
				MEM05005B	Carry out mechanical cutting				3.5
				MEM05013C	Perform manual production welding				3.5
				MEM05014C	Monitor quality or production welding/fabrications				3.5
				MEM05053A	Set and edit computer controlled thermal cutting machines				3.5
				MEM07001B	Perform operational maintenance of machines/equipment				3.5
				MEM07003B	Perform machine setting (routine)				3.5
				MEM07015B	Set computer controlled machines/processes				3.5
				MEM07024B	Operate and monitor machine/process				3.5
				MEM07028B	Operate computer				3.5



					controlled machines/processes				
				MEM08002C	Pre-treat work for subsequent surface coating				3.5
				MEM08006B	Produce clear and/or coloured and/or sealed anodised films on aluminium				3.5
				MEM08007B	Control surface finish production and finished production quality				3.5
				MEM08008B	Operate and control surface finishing waste treatment process				3.5
				MEM08010B	Manually finish/polish materials				3.5
				MEM08011B	Prepare surfaces using solvents and/or mechanical means				3.5
				MEM08014B	Apply protective coatings (basic)				3.5
				MEM08015B	Apply protective coatings (advanced)				3.5
				MEM09002B	Interpret technical drawing				3.5
				MEM11006B	Perform production packaging				3.5
				MEM12023A	Perform engineering measurements				3.5

				MEM13003B	Work safely with industrial chemicals and materials				3.5
				MEM14004A	Plan to undertake a routine task				3.5
				MEM14005A	Plan a complete activity				3.5
				MEM16007A	Work with others in a manufacturing, engineering or related environment				3.5
				MEM16008A	Interact with computing technology				3.5
				MEM18001C	Use hand tools				3.5
				MEM18002B	Use power tools/hand held operations				3.5
				PMBHAN103	Shift materials safely by hand				3.5
				PMBPROD242	Bond polymers to surfaces				3.5
				PMBPROD287	Weld plastics materials				3.5
				CPCCN3003A	Manufacture components for door and window frames and doors (timber)				3.5
				CPCCSH2003A	Apply and install sealant and sealant devices				3.5

				TAEDEL301	Provide work skill instruction				3.5
				TLILIC2001	Licence to operate a forklift truck				3.5
					<b>Total qualifications</b>	1			
					<b>Total Units of Competency</b>	60			
					<b>Total Skill Sets</b>	1			

## Appendix B

### List of Stakeholders

Name	Organisation
Jake Luhrs	DLG Aluminium & Glazing
Darshan Nagarsekar	Australian Glass Group
Andrew Walton	Viridian Glass
Ashley Dawkins	Evolution Windows
Bryn Buckley	REHAU
Rod Redgwell	Lowes Glass and Aluminium
Phil Banning	Central Coast Shopfronts
Stuart Khan	AWS
Joseph Mazey	Breezway
Mark Topp	Rosebud Windows Pty Ltd
Richard Adams	R&D Glass Services
Ben Anthony	Anthony Innovations
Peter Wilkin	Stegbar
Robert Hawke	Obeco Glass Blocks
Bruce Porich	Bayview Glass (Aust) Pty Ltd
Josephine Lazzaro	Trend Windows & Doors
Allan Hickey	G. James Glass & Aluminium Pty. Ltd.
Matt Galvin	SGA Architectural Window Solutions
Andrew Sattler	Wideline Windows
Paul Taranto	Talum Windows
Simon Robertson	Austview Sashless Windows
Keith Chaston	Breezway Australia
Barry Banks	G James
Mark Dunham	Rylock Pty Ltd
Bob Madani	Alumode Windows P/L
Dominic Robertson	G James Glass & Aluminium (Qld) Pty Ltd
Marcus Holland	GP Glass
Carl Costabile	European Window Co
Tony Worsley	Bradnam's Windows & Doors
Ray Kwan	Architectural Window Systems (AWS)
Roland Rode	O'Brien Glass
Garry Thomson	MSP Group T/A Seaview Joinery
Barry Lunn	Alspec

<b>Name</b>	<b>Organisation</b>
Wayne Nicholas	NGA Windows Pty Ltd
Jeff Rotin	Capral Limited
Leonard Lohan	Rylock Pty Ltd
Gary Smith	Australian Window Association
Milan Grcic	Australian Glass and Glazing
Tony Muffet	All Seasons Thermal Windows
Cherrie Handebo	Taberner Glass
Jim Johnson	Schlegel
Mark Dandridge	Dowell Windows
Gary Slater	LGA(WA)
Rachel Driessen	G.James Glass and Aluminium
Justin Wakeling	GlassCo Metro
David Barber	Mitchell Glass Pty. Ltd.
Ian Murphy	Skylight Industry Association
Shane Brown	Darley Aluminium
Matthew Drake	Innovative Window Solution
Brian Imlach	GPglass
Kevin Taranto	Taranto Windows & Glass
James Whitehouse	Capral
Glen	Lotus Folding Walls & Doors
Michael OKeefe	AWS
Adrian Lafleur	Magnetite Australia Pty Ltd
Joanne Higgins	Evo Windows & Doors
Gavin Symes	Portland Aluminium & Glass
David Dimech	Trend windows
Peter Costello	Batemans Bay Windows
Emina	Baseline Windows and Doors
Kane Tierney	O'Brien Glass
David O'Connell	Weatherall Windows PTY LTD
Angela Schutz	Rema Windows
John Rule	Dengate Joinery
Mark Gunn	Northern Glazing
Richard Harrison	Alspec
Stephen Eggleton	Somfy
Brent Hinschen	B&N Glass and Aluminium Pty Ltd
Garry Stone	Centor Australia
Brett Dickson	Solatube

<b>Name</b>	<b>Organisation</b>
Robert Astill	G.James Windows & Doors (QLD) Pty Ltd
Michael VanDenBerghe	Alspeg
Ryan Knight	Viewco Glass
Shane	Makeview WIndows & Doors
Jann O'Connor	Australian Window Association
Amy Pierson	A&L Windows
Dylan Parker	Glass Co Metro
Derek Larmour	Living Design Double Glazing P/L
Alex Panozzo	O'Brien Glass
Kevin Whight	Hitec Glazing Pty Ltd
Brendan O'Reilly	Jason Windows
Bill Dreger	Bill Dreger Glass & Aluminium P/L
John Garth Kirkland	Cool Change Doors and Windows P/L
Daniel Cavasinni	Jeld-Wen Australia
Joost Bouten	Orgadata
Hassan Farhat	Five Star Aluminium
Peter den Boer	Jason Windows
Doug Stewart	Modern Glass
Gerard Hickey	Architectural Window Systems
Andrew Goggin	Darley Aluminium
Brett Margin	Wideline Windows
David Brogan	Breezway Australia
Philip Trimnell	A&L Windows Pty Ltd
Tony Paarhammer	Paarhammer P/L
Shane McDuff	Fenestration Solutions Australia
Mark Dorrough	BAAM Consulting
Stuart Yates	Rylock Pty Ltd
Maureen Carter	Improvement Tools (Qld) Pty Ltd
Michael Brookes	Evolution Window Systems
Chris Cartwright	Buildersmart / D&W
Michael Dalton	Glass Supplies P/I
Darryl Johnson	Johnson Home Improvements
Lisa Oldfield	Busselton Aluminium Windows
Dyann Stewart	Fairview Systems Ltd
Robert Starcic	Coastal Windows
Daniel Chidgey	Arch System Fabrication
Ian Dowd	Tasman Windows Pty Ltd

Name	Organisation
Scott Bourbousson	Meshtec International co ltd
Peter Mallios	Vertikote Group
Vicki Leslie	Bretts Architectural Window Solutions
Karen Porter	Solace Creations
Stuart Healy	Acme1
Stephen Bleakley	Allglass & Aluminium
Brad Garratt	Open Windows and Doors Pty Ltd
Michael Anderson	Horizon Windows & Doors Pty Ltd
Deanne McConkey	Glass Co Metro
Grahame Vile	BAAM Consulting
Nathan Port	Jason Windows
Vladimir Alter	Orion Aluminium
Mark McGuinness	AWS
Leanne Luhrs	DLG Aluminium & Glazing Pty Ltd
Christopher Shoemark	Glass Co Metro
Daniel Gaunt	Glass Co Metro
James Daley	AWS
Andre Kastoun	Leda Aluminium P/L
Dean Finkelde	AWS
Andrew M. Micos	MAC Windows
Lee Carter	Department of Education and Training VIC