



Australian Government

MSS015023 Design sustainable product or process

Release: 1

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Modification History

Release 1. Updated unit code. Changes to performance criteria. Range of conditions removed. Assessment requirements amended. Equivalent outcome.

Application

This unit describes the skills and knowledge to redesign an existing, or design a new, product or process to achieve optimal sustainability outcomes.

This unit applies inside organisations and their value chains. A manager or technical specialist who has a major responsibility for sustainability as part of a broader work role would typically undertake this unit, or sustainability may be their primary work responsibility. The manager or technical specialist may undertake this alone or as part of a team.

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

Pre-requisite Unit

Nil

Competency Field

Sustainable operations

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Define parameters of new or improved product	1.1	Consult with stakeholders to determine required function, performance and aesthetics of new product
		1.2	Identify market, expected time to market and cost constraints of product and production process
		1.3	Identify requirements with possible high sustainability impacts
		1.4	Negotiate requirements to achieve desired sustainability impacts

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
		1.5	Develop agreed definition of product requirements
2	Develop alternative product and process designs	2.1	Identify alternative resource requirements
		2.2	Identify alternative processes
		2.3	Determine the possible sustainability impacts of different combinations of resources and processes
		2.4	Test alternative product and process designs against original product requirement definitions
		2.5	Identify product requirements which may be causing significant sustainability impacts
		2.6	Renegotiate product requirements to lessen sustainability impacts
		2.7	Short-list preferred resources and processes
3	Evaluate life cycle impacts	3.1	Estimate life cycle sustainability impacts for each short-listed alternative
		3.2	Identify process steps with greatest sustainability impact
		3.3	Evaluate process steps for alternatives and modifications with lower impact
		3.4	Select alternative which best meets requirements and has the lowest sustainability impact
4	Confirm design	4.1	Develop selected design
		4.2	Confirm life cycle sustainability impacts
		4.3	Review design against product requirements
		4.4	Obtain required authorisations
		4.5	Document design in the required form

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

5 Prepare for implementation

- 5.1 Consult with key stakeholders
- 5.2 Identify key measures for monitoring implementation of design
- 5.3 Identify data sources required by key measures
- 5.4 Organise for data to be captured and manipulated

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS015004 Design sustainable product or process.

Links

The MSS Sustainability Companion Volume implementation Guides are available from VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS015023 Design sustainable product or process

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- redesigned an existing, or designed a new, product or process for optimal sustainability outcomes.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- sustainability impacts from using different materials and different processes and to produce products of different specifications and life cycle outcomes
- alternative sources of materials and components and the sustainability differences of each
- alternative processes and the sustainability differences of each, including expression in terms of carbon equivalence
- product and process design
- new product parameters
- design documentation
- methods of monitoring of product development and manufacture.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions, contingencies, facilities, equipment and resources.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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