



Australian Government

MSS015002 Develop strategies for more sustainable use of resources

Release: 1

MSS015002 Develop strategies for more sustainable use of resources

Modification History

Release 1. Supersedes and is equivalent to MSS015002A Develop strategies for more sustainable use of resources.

Application

This unit of competency covers identifying strategies for more sustainable uses of resources. The unit includes the identification of waste (muda) as part of a strategy for achieving better sustainability outcomes in a process as well as quantifying theoretical and actual resource (including energy) consumption.

This unit applies inside organisations and their value chains and specifically applies to the use of resources as part of an overall response to improving sustainability. The unit has been developed with manufacturing operations as a focus. However, because of the range of organisations in a typical manufacturing value chain it may also be applied to other types of organisations.

The unit assumes that a decision to attempt to achieve more sustainable use of resources has already been made. The unit covers the skills needed for developing a strategic approach to resource use at the organisation or value chain level.

The unit does not cover the technical skills required to implement specific initiatives that may be identified as part of the strategic plan. However, there is a requirement to present and organise data. The complexity of this requirement will vary according to the type and scale of the organisation's processes.

Where the carbon footprint (or water footprint or similar) of an enterprise or value chain is known, the unit can be applied to developing strategies for the reduction of that footprint. A manager or technical specialist who has a major responsibility for sustainability as part of a broader work role would typically undertake this, or sustainability may be their primary work responsibility.

For specific techniques covering the auditing of water, energy, emissions and transport, refer to relevant sustainability audit units.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

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 | Quantify resource consumption | 1.1 | Identify all significant resources used by process. |
| | | 1.2 | Identify consumption measurements available for each resource. |
| | | 1.3 | Determine consumption for each resource. |
| 2 | Quantify resource loss | 2.1 | Determine theoretical consumption of each resource. |
| | | 2.2 | Compare theoretical consumption with actual consumption. |
| | | 2.3 | Determine loss (emission) for each resource. |
| 3 | Recommend strategies for reducing muda (waste) | 3.1 | Short-list high emission process steps. |
| | | 3.2 | Analyse process to identify emission steps or locations. |
| | | 3.3 | Determine root cause of emission. |
| | | 3.4 | Investigate methods for reducing emission. |
| | | 3.5 | Develop strategies and recommendations for improvement. |
| 4 | Prepare resources use audit report | 4.1 | Identify purpose of report and key stakeholders. |
| | | 4.2 | Compile data, implications and recommendations. |
| | | 4.3 | Consult with stakeholders as appropriate. |
| | | 4.4 | Draft and present report. |

Foundation Skills

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

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

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Muda (waste) includes all of

- excess production and early production
- delays
- movement and transport
- poor process design
- inventory
- inefficient performance of a process
- making defective items
- activities which do not yield any benefit to the organisation or any benefit to the organisation's customers.

Emissions include one or more of

- known or able to be physically measured emissions of gases, vapours, fumes, liquids or solids
- assumed emissions through material balancing
- assumed emissions through energy loss, including heat, friction and other energy conversion yield losses.

Significant resources are deemed to be significant because they include one or more of

- high volume
- high value
- high environmental significance
- important to the product or process
- covered by legislation or regulation
- important to the enterprise.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS015002A Develop strategies for more sustainable use of resources.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MSS015002 Develop strategies for more sustainable use of resources

Modification History

Release 1. Supersedes and is equivalent to MSS015002A Develop strategies for more sustainable use of resources.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include the ability, for one or more value chain or process, to:

- quantify significant resource consumption and emission using materials balancing
- identify and consult with stakeholders
- develop strategies for reducing emissions
- prepare and present a resources use report.

Knowledge Evidence

- Must provide evidence that demonstrates sufficient knowledge to interact with relevant personnel and be able to identify strategies for more sustainable uses of resources including knowledge of:
 - the concept of muda (waste) and muda categories
 - muda reduction methods and strategies
 - methods and uses of material balancing
 - methods and uses of energy balancing
 - methods of comparing theoretical with actual resource consumption
 - methods for mapping processes and resources consumed
 - methods of measuring actual resource usage
 - AS/NZS ISO 14001 Environmental Management Standards (or its authorised replacement or other relevant standard).

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence shall be based on a holistic assessment of the evidence.
- The collection of performance evidence is best done from a report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.

- A third party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should use a real project where strategies for more sustainable uses of resources are identified for an operational workplace.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process such as workbooks, written assessments or interviews (provided a record is kept).
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competency and currency.
- Technical competence can be demonstrated through:
 - relevant VET or other qualification/Statement of Attainment AND/OR
 - relevant workplace experience
- Currency can be demonstrated through:
 - performing the competency being assessed as part of current employment OR
 - having consulted with an organisation providing relevant environmental monitoring, management or technology services about performing the competency being assessed within the last twelve months.

Links

Companion Volume implementation guides are found in VETNet -

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