



Australian Government

MSS015015 Evaluate sustainability impact of a process

Release: 1

MSS015015 Evaluate sustainability impact of a process

Modification History

Release 1. Supersedes and is equivalent to MSS015015A Evaluate sustainability impact of a process.

Application

This unit of competency covers evaluating the impact on sustainability of an entire process (manufacturing, logistics, office or other process) or the product from such a process. It does not specifically address the regulatory requirements for an environmental impact statement.

This unit applies to establishing the overall or broad sustainability impact of a process and making recommendations for mitigating negative sustainability impacts. It may apply to value chains beyond the boundary of an organisation, or the entire value chain within an organisation. The unit scope includes products made, services offered, and use of sites by an organisation or part or all of its value chain. This unit covers the application to substantial portions of value chains and may be beyond the boundaries of the organisation.

Environmental sensitivities referred to in this unit are at the issue level. The technical measurement of operational performance or measurement of emissions or other environmental impact is not covered by this unit.

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. The manager or technical specialist may undertake this alone or as part of a team.

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.

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|---|--|-----|--|
| 1 | Evaluate the value chain for the selected process | 1.1 | Select portion of the value chain for analysis. |
| | | 1.2 | Identify process steps along the chain. |
| | | 1.3 | Identify the change which occurs at each step. |
| | | 1.4 | Define the interactions with the environment at each step. |
| 2 | Determine sustainability issues for the process | 2.1 | Identify environmental sensitivities at each step in the value chain. |
| | | 2.2 | Identify other sustainability issues at each step in the value chain. |
| | | 2.3 | Short-list sustainability issues which will require action to mitigate or eliminate negative sustainability impacts. |
| 3 | Analyse sustainability issues for the process | 3.1 | Determine root cause of each short-listed issue. |
| | | 3.2 | Develop possible solutions to root causes. |
| | | 3.3 | Develop alternative mitigation strategies where needed. |
| | | 3.4 | Estimate resources required for solutions and alternative mitigation strategies. |
| | | 3.5 | Rank possible solutions strategies by desirability. |
| | | 3.6 | Produce and present report to stakeholders. |

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.

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|---|---|
| Interactions with the environment include one or more of | <ul style="list-style-type: none">• drawing physical resources from the environment• releasing materials to the environment (e.g. emissions)• drawing energy from/releasing energy to the environment. |
| Environmental sensitivities include one or more of | <ul style="list-style-type: none">• fragile areas and rare or threatened species• heritage or religious issues• hazardous emissions• regulated emissions or other regulatory issues• community perceptions or other issues. |
| Sustainability issues include one or more of | <ul style="list-style-type: none">• resource footprint (e.g. carbon and water) of product and process• current and future availability of raw materials• current and future availability of energy• waste generation and disposal• efficiency of process• the extent to which the production process and product affects the environment• relationship with the local and broader community (e.g. effect of operations on aesthetic appearance, preservation of heritage, and proximity to schools and religious facilities)• extent of regulatory oversight and cost of compliance. |
| Desirability ranking includes one or more of | <ul style="list-style-type: none">• direct dollar benefit/cost• customer benefit• stakeholder perception• life cycle improvements. |

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS015015A Evaluate sustainability impact of a process.

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 MSS015015 Evaluate sustainability impact of a process

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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 (1) or more processes/product families, to:

- identify steps in the process and portion of manufacturing value chain
- determine ecological and sustainability impacts of processes
- determine root causes of impacts
- evaluate solution and mitigation strategies.

Knowledge Evidence

Must provide evidence that demonstrates sufficient knowledge to interact with relevant personnel and be able to evaluate the impact on sustainability of an entire process/product including knowledge of:

- value chain mapping and analysis with regard to sustainability
- process and changes which occur within the process
- environmental impacts of materials and energy used/emitted
- environmental sensitivities of all areas impacted by the value chain (and related areas where impact spreads beyond immediate area, e.g. by loss of containment)
- root cause analysis and problem solving
- mitigation strategies
- benefit/cost analyses techniques
- methods of dealing with sustainability issues and the benefits arising from each
- AS/NZS ISO 14000 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 the overall sustainability impact of a process is established and recommendations for mitigating negative sustainability impacts are made 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.

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