



Australian Government

MSS015016 Implement and monitor reengineering for sustainability

Release: 1

MSS015016 Implement and monitor reengineering for sustainability

Modification History

Release 1. Supersedes and is equivalent to MSS015016A Implement and monitor reengineering for sustainability.

Application

This unit of competency covers identifying, implementing and monitoring a reengineering process to achieve a sustainability improvement.

This unit applies to production operations that have identified reengineering as a potential strategy for improving sustainability.

This unit includes the identification of the process for reengineering, the development of the sustainability objectives of the reengineering project, establishment of project objectives, implementation and evaluation. The reengineering project may involve consultations and participation by customers and suppliers in the value chain.

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.

The technical measurement of operational performance or measurement of emissions or other environmental impact is not covered by this unit.

This unit does not supply the technical skills for undertaking the engineering alterations, such as installation, commissioning and operation of equipment.

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 | Determine the need for reengineering | 1.1 | Choose a process for improvement. |
| | | 1.2 | Analyse process performance. |
| | | 1.3 | Compare reengineering approach with other process improvement methodologies. |
| | | 1.4 | Confirm the need for reengineering. |
| | | | |
| 2 | Determine process objectives | 2.1 | Identify stakeholders in the process. |
| | | 2.2 | Research and define perceived stakeholder benefit from process. |
| | | 2.3 | Translate perceived benefits into product and process specifications. |
| | | 2.4 | Collect current available metrics on process performance. |
| | | 2.5 | Determine metrics for monitoring future sustainability related and other process performance. |
| | | | |
| 3 | Facilitate reengineering study | 3.1 | Organise appointment of reengineering team. |
| | | 3.2 | Determine impact on suppliers and customers during and after reengineering. |
| | | 3.3 | Acquire required resources and authorities to proceed. |
| | | 3.4 | Develop descriptions of alternative processes which will deliver required specifications. |
| | | 3.5 | Short-list most likely alternatives. |
| | | 3.6 | Evaluate short-listed alternatives. |
| | | 3.7 | Rank evaluated short-listed alternatives by desirability. |

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| 4 | Implement preferred option | 4.1 | Select preferred option. |
| | | 4.2 | Develop implementation plan for preferred option. |
| | | 4.3 | Negotiate required resources with relevant stakeholders. |
| | | 4.4 | Negotiate timelines and measures/indicators of success with change stakeholders. |
| | | 4.5 | Acquire and deploy resources required to achieve agreed responses. |
| | | 4.6 | Monitor implementation and take action as required to achieve required responses. |
| | | 4.7 | Renegotiate with relevant stakeholders as necessary. |
| 5 | Recommend further improvements | 5.1 | Measure improvements actually obtained. |
| | | 5.2 | Identify non-compliances with planned improvements. |
| | | 5.3 | Determine additional improvements desirable. |

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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|---|---|---|
| Process performance analysis includes one or more of | • | benchmarking comparisons |
| | • | comparison with theoretical performance |
| | • | comparisons with regulatory requirements |
| | • | examination of operational and maintenance records |
| | • | consultation with operational and maintenance staff to identify informal history (e.g. excessive effort in 'work arounds', and making it work in spite of the system) |
| | | |

	• conflicts in the organisation • an extremely high frequency of meetings • excessive use of non-structured communication (memos and emails).
Process improvement methodologies include one or more of	• kaizen • kaizen blitz • technical optimisation approaches • reengineering, including new plant and equipment, modification of existing plant and equipment and changes to specification of product or process.
Product includes	• goods • services.
Desirability ranking includes one or more of	• direct dollar benefit/cost • customer benefits • stakeholder perception • life cycle improvements • flexibility to adapt to future needs.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS015016A Implement and monitor reengineering for sustainability.

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 MSS015016 Implement and monitor reengineering for sustainability

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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 or more process/product family, to:

- compare reengineering to other possible solutions to sustainability issues
- understand and collect metrics on current and future process performance
- implement a reengineering process to achieve desired sustainability objectives
- utilise benefit/cost and brainstorming techniques appropriately.

Knowledge Evidence

- Must provide evidence that demonstrates sufficient knowledge to interact with relevant personnel and be able to identify, implement and monitor a reengineering process including knowledge of:
 - benchmarking
 - process analysis techniques
 - process improvement methodologies (e.g. kaizen, kaizen blitz, reengineering)
 - calculation of benefit/cost
 - brainstorming techniques
 - benefit/cost analysis techniques
 - project improvement planning/scheduling
 - process monitoring and critical measures

root cause analysis and other problem-solving techniques.

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 reengineering has been identified as a strategy for improving sustainability in 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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