



Australian Government

Department of Education, Employment and Workplace Relations

MSS014002A Evaluate sustainability impact of a work or process area

Release: 1

MSS014002A Evaluate sustainability impact of a work or process area

Modification History

Not applicable.

Unit Descriptor

This unit of competency covers evaluating the impact on sustainability of a work or process area or a stage of production or logistics. This may be undertaken as a stand alone evaluation or as part of an overall evaluation of an entire process or a value chain.

Application of the Unit

This unit applies inside organisations and their value chains. It typically applies to only a portion of a value chain. 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 processes in non-manufacturing parts of organisations and other types of organisations.

This unit applies to establishing the overall or broad sustainability impact of processes undertaken in a work area and making recommendations for mitigating negative sustainability impacts. The unit scope includes evaluating the impact on products made, services offered, and use of sites by an organisation or manufacturing value chain member, such as a contractor. This unit covers only that portion of the value chain which is totally within the boundaries of the selected work area. For entire value chains or value chains outside the boundaries of the organisation, consider MSS015015A Evaluate sustainability impact of a process.

This unit applies to employees with work area responsibilities, such as team leaders, maintenance staff, technicians and others who have some sustainability responsibility as part of their job.

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.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

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| 1 Evaluate the work or process area | <ul style="list-style-type: none">1.1 Identify the boundaries of the process or work area to be evaluated1.2 Identify all process steps within this area1.3 Identify the change which occurs at each step1.4 Define sustainability interactions at each step |
| 2 Determine sustainability issues for the work or process area | <ul style="list-style-type: none">2.1 Identify sustainability goals of enterprise as they relate to the process or work area2.2 Identify environmental sensitivities at each step in the process or work area2.3 Identify other sustainability issues at each step in the selected portion of the value chain2.4 Short-list high priority sustainability issues |
| 3 Analyse sustainability issues for the work or process area | <ul style="list-style-type: none">3.1 Determine root cause of each short-listed sustainability issue3.2 Determine possible solutions to root causes3.3 Estimate resources required for solutions and alternative mitigation strategies3.4 Rank possible solutions strategies by desirability3.5 Recommend preferred solutions in accordance with organisational procedures and protocols |

Required Skills and Knowledge

Required knowledge includes:

- process mapping 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 work/process area (and related areas where impact spreads beyond immediate area, e.g. by loss of containment)
- root cause analysis and problem solving
- mitigation strategies as relevant to work/process area
- simple benefit/cost analyses techniques
- sustainability issues relevant to the work/process area
- AS/NZS ISO 14000 Environmental Management Standards

Required skills include:

- identifying sustainability goals of the enterprise and identifying implications for process or work area
- analysing and prioritising sustainability related issues
- liaising and discussing with stakeholders on possible solutions and strategies for sustainability improvement
- using problem solving techniques, including root cause analysis
- process mapping the process area

Evidence Guide

Overview of assessment	A person who demonstrates competency in this unit must be able to evaluate a work area, identify the sustainability issues and propose a range of solutions and strategies to improve sustainability.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in this unit of competency in new and different situations and contexts. Critical aspects of assessment and evidence include: • identifying steps in the process and portion of manufacturing value chain • determining ecological and sustainability impacts of processes • determining root causes of impacts • evaluating solution and mitigation strategies.
Context of and specific resources for assessment	• This unit of competency is to be assessed in the workplace or a simulated workplace environment. • Assessment should emphasise a workplace context and procedures found in the candidate's workplace. • This unit of competency may be assessed with other relevant units addressing sustainability at the enterprise level or other units requiring the exercise of the skills and knowledge covered by this unit. • The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team.
Method of assessment	• In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work-like environment.
Guidance information for assessment	

Range Statement

Process	Process may include: any manufacturing, logistics, administrative, information technology or business process which may be in a manufacturing value chain
Interactions with the environment	Interactions with the environment may include: - drawing physical resources from the environment - releasing materials to the environment (e.g. emissions) - drawing energy from/releasing energy to the environment
Environmental sensitivities	Environmental sensitivities may include: - fragile areas, rare or threatened species - heritage or cultural sensitivity issues - hazardous emissions - regulated emissions or other regulatory issues - community perceptions or other issues - other issues, such as those identified in ISO 14001 Environmental Standards
Priority rankings	Priority rankings may include: - issues of high impact and high probability of occurrence - issues aligned to organisations strategic direction - issues related to regulatory requirements
Determine	Determining may include: - developing solutions within the scope of skill - discussing issues with relevant experts to develop a solution - undertaking research (literature or physical) within the scope of skill to develop a solution
Sustainability issues	Sustainability issues (as relevant to the work/process area) may include: - need to reduce the carbon footprint of product and process through reduction in use of: - energy - water - raw materials - emissions - embedded carbon in transport, storage, rework and errors, inefficient processes and design, and general facility efficiencies

	Sustainability related issues may also exist irrespective of the carbon equivalence aspects of the issue. This may include: • current and future availability of raw materials • current and future availability of energy • extent and type of waste generation and disposal • efficiency of process in terms of consumption of materials and energy regarded as in short supply or which are regarded as environmentally sensitive • the extent to which the production process, product and waste affects the environment, including effects on: • climate • quality of local air and water • ecology • noise • relationship with the local and broader community (e.g. effect of operations on aesthetic appearance, preservation of heritage, proximity to schools, religious facilities, and impact on local residents and infrastructure) • extent of regulatory oversight and extent and cost of compliance • AS/NZS ISO 14000 Environmental Management Standards • consumer demand for more sustainable products and processes • ethical supply chain
Desirability ranking	Desirability ranking includes: • direct dollar benefit/cost • customer benefit • stakeholder perception: • shareholders • employees • community • financial community • other • life cycle improvements • compliance with regulations • company sustainability strategy and strategic plans • company commitment to covenants and initiatives • availability of incentives

Unit Sector(s)

Sustainability

Custom Content Section

Not applicable.