Australian Government

Department of Education, Employment and Workplace Relations

MSS405060A Develop the application of enterprise control systems in an organisation

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

MSS405060A Develop the application of enterprise control systems in an organisation

Modification History

New unit, superseding MSACMT660A Develop the application of enterprise systems in manufacturing - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required to continuously modify and improve or develop new enterprise-wide information technology (IT) based control systems, such as Supervisory Control and Data Acquisition (SCADA), Enterprise Resource Planning (ERP), Materials Resource Planning (MRPII) and similar. Typically the development of such a system will be in liaison with an appropriate technical expert who may be an internal expert or an external consultant.

Application of the Unit

This unit applies to an individual responsible for the development and implementation of new systems or modifications/changes to the current system. While the individual might generate the ideas for change themselves and also undertake a significant part of the final implementation, they may also be working closely with an appropriate technical expert (such as the software system supplier) who may actually make the modifications.
This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information and consulting with stakeholders. Teamwork, problem solving, initiative and enterprise, and planning and organising skills are required to determine and implement effective enterprise systems and modifications. This unit also requires computer skills and aspects of self-management and learning to ensure feedback and new learning is integrated into system planning.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Monitor information and control needs of organisation	1.1	Check the use of current information
		1.2	Check the operation of current control systems
		1.3	Communicate regularly with key information users regarding any new or changed information control needs, including information needs from and to value stream
		1.4	Identify short comings in information and control provision
		1.5	Take appropriate action on information and control needs to meet organisational needs
2	Check the current system against organisation needs	2.1	Check the routine use of the system
		2.2	Check any system alarm or non-conformance notification and control operation
		2.3	Communicate regularly with key stakeholders about current system use and application
		2.4	Determine effect of non-conformance on enterprise system
		2.5	Identify problems/issues

		2.6	Take appropriate action on problems and issues
3	Determine developments needed in a new or significantly modified system	3.1	Identify needs requiring a new system or development of modifications to the current system
		3.2	Draft scope, specifications and outcomes required
		3.3	Liaise with key stakeholders and relevant technical experts to refine scope, specifications and outcomes needed in new or modified system
		3.4	Agree final scope, specifications and outcomes
4	Develop system	4.1	Develop project plan
		4.2	Ensure ongoing consultation with all relevant stakeholders
		4.3	Manage development project
		4.4	Manage trialling of modified system
		4.5	Ensure modified system meets organisational requirements
5	Implement modified system	5.1	Liaise with all affected personnel
		5.2	Develop and agree an implementation strategy
		5.3	Ensure all personnel have required skills
		5.4	Implement modified system
		5.5	Monitor implementation and modify, as required

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- identifying organisation needs from enterprise control system, including:
  - critical features (e.g. occupational health and safety (OHS), regulatory compliance and emergency shutdown)
  - essential features and operation controls
  - access levels and access security
  - cost of installation and operation
  - interfaces (e.g. human-machine, machine-machine, and system-system, e.g. SCADA with financial control systems)
- correctly accessing and inputting information
- communicating with stakeholders on information and control requirements
- matching monitoring, control and reporting capability of system to organisation requirements
- analysing features of enterprise system and determining training needs
- solving problems to root cause
- monitoring trials and initial implementation of enterprise control system

Required knowledge

Required knowledge includes:

- capability of resource planning/SCADA systems, as appropriate
- information and control needs of organisation/process
- project management
- support/training/skill development mechanisms available for access by personnel

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate	A person who demonstrates competency in this unit must be able to provide evidence of their ability to:

competency in this unit	• analyse organisation needs and match to enterprise control system features • determine critical features required in enterprise control system • modify system as a result of trials or changing needs.
Context of and specific resources for assessment	Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices. Access may be required to: • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
Method of assessment	A holistic approach should be taken to the assessment. Competence in this unit may be assessed by using a combination of the following to generate evidence: • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge. Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being

	performed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	Competitive systems and practices may include, but are not limited to:
	• lean operations
	• agile operations
	• preventative and predictive maintenance approaches
	• monitoring and data gathering systems, such as SCADA software, ERP systems, MRP and proprietary systems
	• statistical process control systems, including six sigma and three sigma
	• Just in Time (JIT), kanban and other pull-related operations control systems
	• supply, value, and demand chain monitoring and analysis
	• 5S
	• continuous improvement (kaizen)
	• breakthrough improvement (kaizen blitz)
	• cause/effect diagrams
	• overall equipment effectiveness (OEE)
	• takt time
	• process mapping
	• problem solving
	• run charts
	• standard procedures
	• current reality tree
	Competitive systems and practices should be interpreted so as to take into account:
	• the stage of implementation of competitive systems and practices
	• the size of the enterprise
	• the work organisation, culture, regulatory

	environment and the industry sector

SCADA	SCADA refers to: • a number of systems which automatically collect critical process data, perform required mathematical manipulations on it and then make control decisions and/or give required information personnel for action In the continuous operations sector, the SCADA system is sometimes integrated into other sophisticated computer control systems, such as distributed control system (DCS) and indeed these systems do merge in advanced systems. These organisations may simply refer to their SCADA as the DCS or other similar term (such as the proprietary name of the computer system)
Resource planning	Planning software is a general term applied to a number of software systems which integrate a range of business information, such as: • finance • logistics maintenance and production It is frequently referred to by names, such as ERP and MRP/MRPII
Value stream	The value stream begins with the customer and includes all actions (both value adding and non value added) by both internal sections/departments and external organisations to meet a customer requirement. Depending on the operations and the customer requirement stages where value stream actions may occur include: • sales outlet/representative • information gathering, data analysis and research • product design • raw material sourcing • intermediate processing • final assembler/collation/preparation • support services (e.g. accounting, finance and legal) • storage and delivery to customer • after market support

Unit Sector(s)

Unit sector   Competitive systems and practices

Custom Content Section

Not applicable.