MSS407012 Lead a process to determine and solve root cause for a complex problem

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSS407012A Lead a problem solving process to determine and solve root cause

Application

This unit of competency covers the skills and knowledge required to guide or lead a problem-solving process to solve complex and/or unusual problems. The problem-solving process will usually involve the use of either real or nominal groups to determine the root cause and propose the solution.

This unit applies to managers and/or technical experts who are confronted by complex problems to which they need to develop a solution. The problem may be related to any area or process within the organisation or in the value stream and may have been formally presented to the individual for consideration or arise as part of other work.

The person may or may not have the required technical expertise for the particular problem, although the problem will require technical expertise to be solved. The problem may be capable of being adequately defined at the beginning of the problem solving activity, or may be progressively defined through continued iterations of the problem-solving activity.

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

Pre-requisite Unit

Nil

Competency Field

Competitive systems and practices

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 **Recognise**	1.1	Identify a complex issue which needs to be addressed.

	complex problem	1.2	Undertake an initial investigation of the issue.
		1.3	Determine initial areas of expertise and data which may be required to analyse the problem.
		1.4	Develop an initial definition of the problem.
2	**Develop problem-solving methodology**	2.1	Draft a problem-solving methodology.
		2.2	Develop required approaches and protocols for obtaining required data and information.
		2.3	Establish group to assist with problem solving.
		2.4	Allocate tasks, responsibilities and reporting arrangements to group.
		2.5	Develop arrangements for consultation with required people outside of group.
3	**Analyse problem**	3.1	Apply methodology.
		3.2	Obtain data/information.
		3.3	Review problem definition.
		3.4	Review methodology.
		3.5	Obtain additional data/information as required.
4	**Identify root cause**	4.1	Map causal links for the problem.
		4.2	Determine indicators of the problem or the problem precursors.
		4.3	Identify causes which can be controlled/brought under control.
5	**Develop a solution**	5.1	Develop solutions for controllable causes.
		5.2	Determine benefit/cost for proposed solutions.

		5.3	Investigate proposed solutions for efficacy.
		5.4	Select the best available solution.
		5.5	Obtain necessary support and authorisations for proposed solution.
6	**Check problem is solved and standardised**	6.1	Monitor indicators of problem/problem precursor.
		6.2	Review problem solution/implementation as required.
		6.3	Ensure appropriate solution is standardised.

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.

Competitive systems and practices include one or more of:	- lean operations - agile operations - preventative and predictive maintenance approaches - 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.

Complex problem includes one or more of:	• requires going into the value stream for data/information • is wider than just applying to a single job • applies to less common solutions or problems • requires a higher level of knowledge and skill • requires significant specialist knowledge • requires significant specialist skill • requires more theory/understanding of technology or process • data is not easily available and may need particular strategies to obtain • requires overcoming resistance from people, including employees, customers or suppliers • requires extracting data not regularly reported from SCADA or similar systems • the problem and/or proposed solutions require reporting or authorisations from a Board or external authorities, such as licensing or regulatory bodies.
Problem recognition includes one or more of:	• an obvious and current complex problem • an intractable problem which has been known about and 'lived with' for some time • a complex problem which has not been previously recognised.
Group includes one or more of:	• real (i.e. physical or face to face) • nominal (i.e. never meets and may not know who each other is) • or any combination in between.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS407012A Lead a problem solving process to determine and solve root cause

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998

Manufacturing Industry Skills Alliance