

SEMBIT3-15 - SQA Unit Code F9HY 04

Applying value management (value engineering and value analysis)



Overview

This unit covers the competences required for applying value management (value engineering and value analysis). It involves applying the principles and processes of value management (VM) to the chosen product or process. You will be expected to identify what the customer requires from the product or the process, and to set quantifiable objectives and targets to achieve this. You will need to analyse the functions of the process, identify and allocate costs of each of these functions, and identify the added and non-value added activities within the process. You will also be expected to identify the most appropriate alternatives, carry out a risk assessment of the alternatives, prioritise and rank the alternatives, and identify the expected benefits. You will need to develop these alternatives into detailed proposals that will improve the value of the product or process, and to provide costing recommendations for management approval.

Your responsibilities will require you to comply with organisational policy and procedures for the activities undertaken, and to report any problems that you cannot solve, or that are outside your responsibility, to the relevant authority. You will be expected to take full responsibility for your own actions within the activity, and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will provide a good understanding of your work, and will provide an informed approach to the techniques and procedures used. You will need to understand the principles and processes of value management, and its application, in adequate depth to provide a sound basis for carrying out the activities to the required criteria.

Applying safe working practices will be a key issue throughout.

Performance criteria

You must be able to:

- P1 work safely at all times, complying with health and safety and other relevant regulations and guidelines
- P2 apply the principles and processes of value management (VM) to the chosen product or process
- P3 identify what the customer requires from the product or the process, and set quantifiable objectives and targets for the value management activity
- P4 analyse the functions of the product or process being studied, and allocate costs to those functions
- P5 identify the non-value added activity within the product or process, and suggest alternatives
- P6 develop these alternatives into detailed proposals that will improve the value of the product or process
- P7 identify the new value added process, and implement the plan within agreed timescales

Knowledge and understanding

You need to know and understand:

- K1 the health and safety requirements of the work area in which you are carrying out the value management activities
- K2 how to select a product or process on which to carry out the value management activity
- K3 how to structure and run a value management activity
- K4 how to set quantifiable objectives and targets for the value management activity
- K5 how to carry out a function analysis
- K6 the performance related tools used to qualify customer wants and needs
- K7 the 'cost of function' equation, and how to calculate the cost of function
- K8 FAST diagramming and value trees
- K9 decision making and creativity techniques (brainstorming)
- K10 how value management relates to the overall business strategy and competitive positioning
- K11 how to produce a total cost model and supply chain map for the product or process
- K12 what constitutes value adding and non-value adding activities
- K13 how to identify what a customer requires from a product or process
- K14 how to prioritise and rank the alternatives
- K15 how to complete a risk assessment of the alternatives
- K16 how to prepare the findings into proposals
- K17 how to monitor and track proposals to implementation
- K18 the extent of your own authority, and to whom you should report in the event of problems that you cannot resolve

Additional Information

Scope/range related to performance criteria

You must be able to:

1. produce a total cost model and supply chain map for the product or process, which shows how cost are related to function
2. produce detailed proposals of the findings of the value management activities which:
 - 2.1. identify the non-value added activities and indicate alternatives
 - 2.2. prioritise and rank the alternatives
 - 2.3. include a risk assessment of the alternatives
 - 2.4. identify the most appropriate alternatives
 - 2.5. provide costing recommendations for management approval
 - 2.6. identify expected benefits

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