
Overview

This unit covers the competences required for producing a characteristic selection matrix. It involves working with the customer to score the customer requirements, and applying a characteristic selection matrix to the Six Sigma project to create greater customer satisfaction. You will need to collect the necessary data and, by completing the five-step process, produce a characteristic selection matrix for the chosen activity. This will require you to list the customer key process output variables, score them, list the key process input variables that impact them, numerically rate the interaction between these input and output variables, and use ranking to prioritise future team focus. You will then be expected to use this information to identify activities in the process where improvements can be made.

Your responsibilities will require you to comply with organisational policy and procedures for the activities undertaken, and to report any problems with the activities that you cannot solve, or that are outside your responsibility, to the relevant authority. You will need to ensure that all the necessary documentation and/or visual representation is completed accurately and legibly. 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 produce.

Your underpinning knowledge will provide a good understanding of producing a characteristic selection matrix, and will provide an informed approach to the techniques and procedures used. You will need to understand the principles and application for producing a characteristic selection matrix, 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.

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Producing a characteristic selection matrix

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 work with the customer to score the customer requirements, and apply a characteristic selection matrix to the Six Sigma project
- P3 collect all the required data necessary to create the matrix
- P4 produce a characteristic selection matrix for the chosen activity
- P5 use the matrix produced to identify activities in the process where improvements can be made
- P6 prepare an action plan that will bring about the improvements

Knowledge and understanding

You need to know and understand:

- K1 the health and safety requirements of the area in which you are carrying out the characteristic selection matrix activity
- K2 how to describe a characteristic selection matrix; why we need to produce them; who should create them
- K3 how to generate a characteristic selection matrix using the five-step process
- K4 the meaning of the term 'customer' when producing a characteristic selection matrix
- K5 how to identify key process output variables and key process input variables
- K6 where the characteristic selection matrix appears in the quality function deployment matrix
- K7 the inter-relationship between a characteristic selection matrix and a failure modes and effects analysis
- K8 the inter-relationship between Six Sigma process mapping and a characteristic selection matrix
- K9 how to score a characteristic selection matrix
- K10 how a process map links into a characteristic selection matrix
- K11 how to utilise the results of a characteristic selection matrix
- K12 how to prioritise a Six Sigma project team's focus
- K13 the extent of your own authority within the project, 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 characteristic selection matrix for **two** of the following:
 - 1.1. concept
 - 1.2. product
 - 1.3. design
 - 1.4. process
 - 1.5. system
 - 1.6. machine
2. use the characteristic selection matrix produced to generate scoring parameters for:
 - 2.1. customers
 - 2.2. team members
3. complete the five-step process for generating a characteristic selection matrix:
 - 3.1. list the customer key process output variables
 - 3.2. score the key process output variables
 - 3.3. list the key process input variables that impact the customer key process output variables
 - 3.4. numerically rate the interaction between key process input variables and customer key process output variables
 - 3.5. use ranking to prioritise future team focus

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