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## Overview

This standard is about the skills and knowledge needed to review and select improvement models as part of your organisation's drive to increase the effectiveness and productivity of food and drink operations. This is important in the achievement of excellence and the success of manufacture, processing and supply across the food and drink supply chain.

You will need to show and understand the review process and the practices that lead to the selection of relevant improvement models to support an improvement programme. You will need to understand the complementary relationship of improvement models with larger overarching approaches to improvement. You will need to know how to comply with your company policy for improvement, understand how to take responsibility for your actions, and refer any issues outside of the limit of your authority to others.

This standard is for you if your role requires you to review and select improvement models in food and drink operations including; manufacturing, processing, packing or supply chain activities. You may have responsibilities for aspects of organisational improvement in a team leadership or management role.

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## Performance criteria

*You must be able to:*

### Prepare for review

- 1.confirm and agree the defined scope of the review in accordance with the improvement plan
- 2.obtain information, documentation and resources necessary to support review in accordance with procedures

### Carry out a review to identify relevant improvement models

- 3.research potential improvement models in accordance with the improvement plan
- 4.review prospective improvement models that demonstrate potential to support the improvement plan
- 5.present findings of the review to the relevant personnel and obtain feedback

### Select improvement models for improvement

- 6.evaluate and provisionally select improvement models on a fit-for-purpose and value basis
- 7.discuss provisional selections with the relevant personnel
- 8.communicate and present provisional selections and recommendations to the relevant personnel to agree final selection
- 9.confirm and communicate the final selection improvement models to the relevant personnel

## Knowledge and understanding

### *You need to know and understand:*

1. how the health, safety and hygiene requirements of a work area can influence the selection of improvement models
2. why it is important to review and select a fit-for-purpose and valid improvement model to support the improvement plan
3. what a characteristics selection matrix is and its purpose
4. the five step process used to generate a characteristics selection matrix
5. the inter-relationship between a characteristics selection matrix and a failure modes and effects analysis, Six Sigma process mapping and a quality function deployment
6. the meaning of the term 'sigma score' (Z)
7. how the sigma score (Z) is calculated and used to estimate the percentage outside of specification
8. Cp and Cpk, and how are they calculated
9. how long-term capability is calculated from short term data
10. how to construct a data demographics form and multi variance chart
11. how the chart is used to assess within-piece variation, piece-to-piece variation and time-to-time variation
12. the benefits of multi variance analysis with respect to Design of Experiments (DOE)
13. the number of samples needed for a statistically valid short-term capability study
14. how evolutionary operations (EVOP) can be used to support improvements in food operations
15. what is meant by a EVOP cycle and a phase
16. the data gathered during an EVOP activity
17. how EVOP is used in Six Sigma improvement projects
18. how to prioritise a Six Sigma project team's focus
19. levels of authority linked to problem resolution

IMPQI297

Review and select improvement models in food and drink operations



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