



City Skills



**Improvement  
Practitioner  
Knowledge Skills and  
Behaviours**

The Improvement Practitioner apprenticeship requires the development of the following professional behaviours, knowledge and skills:

## Professional Knowledge

Improvement Practitioners have the knowledge and understanding of:

### K1 **Compliance-**

Legislative and customer compliance requirements including health and safety.

### K2 **Team formation & leadership-**

Decision-making techniques e.g. consensus, authority rule, majority rule.

K3

### **Project management-**

Business case, risk analysis and management, toll-gate reviews, work breakdown structure, lessons learned, pilot studies, project review, process management and measures, benefits tracking.

K4

### **Presentation and reporting-**

Reporting templates, message mapping, case for change.

K5

### **Change management:-**

Stakeholder identification, analysis and management (RACI). Change curve, resistance characteristics, change sponsorship, compelling point of view.

K6

### **Principles & methods-**

The business value of Lean and Six Sigma improvement methods - 8D, practical problem solving, Define Measure Analyse Improve Control, Design for Six Sigma.

K7

### **Project selection & scope-**

$Y=f(x)$  equation (outputs are the result of inputs), business scorecard cascade.

- K8 Problem Definition-**  
Cost of Poor Quality, problem analysis models such as Is/Is Not
- K9 Process mapping & analysis-**  
Swim lane, value stream map, performance metrics – continuous, Parameter diagram, Takt time, Overall Equipment Effectiveness, theory of constraints principles, Kanban.
- K10 Data analysis – basic tools-**  
Spreadsheets and pivot table analysis, statistical analysis software.
- K11 Measurement systems-**  
Repeatability and Reproducibility principles.
- K12 Basic statistics & measures-**  
Control charts - attribute data, principles of normality.
- K13 Data analysis - statistical methods-**  
Measures of central tendency and spread.
- K14 Process capability & performance-**  
Capability analysis – continuous data for normal distribution.
- K15 Root cause analysis-**  
Key principles including symptoms, failure mode, potential/verified cause, critical inputs, escape point. Graphical representation of data with dot, scatter and box plots.
- K16 Experimentation-**  
Active versus passive analytics, design of experiments, experiment plan
- K17 Identification & prioritisation-**  
Selection and prioritisation matrix, Failure Mode and Effects Analysis

## Professional Skills

**Improvement Practitioners have the Skills within the context of their own organisation to:**

**S1 Compliance-**

Work in accordance with organisational controls and statutory regulations.

**S2 Communication-**

Speak and write clearly. Influence others, question effectively. Plan and deliver meetings presenting insight to engage audiences.

**S3 Coaching-**

Observe, listen, use questioning, provide feedback and spot learning opportunities.

**S4 Project management-**

Define, sequence, plan and schedule activities with phases and milestones. Estimate effort and duration. Create and update project charter. Review progress.

**S5 Change management-**

Sponsorship contract, surface and manage resistance, build compelling narratives for change, assess change impact.

**S6 Principals and Methods-**

Select and apply a structured method and appropriate improvement tools engaging with subject matter experts to deliver business benefits.

S7

**Project selection and Scoping-**

Support the identification of improvement opportunity and the scoping of these projects.

S8

**Problem definition-**

Support development of problem/opportunity statements

- S9 Voice of the customer-**  
Support application of techniques to identify and prioritise customers, their requirements and ensure balance against the stated and unstated needs of the business (Voice of the Business).
- S10 Process mapping & analysis-**  
Process map to measure and analyse flow and value. Identify interfaces, functional responsibilities and ownership. Use insight to identify potential opportunities and map future state.
- S11 Lean tools-**  
Seek in-process waste through the understanding of value within the value stream.
- S12 Measurements systems-**  
Plan, carry out and assess results of a measurement system study.
- S13 Data acquisition for analysis-**  
Develop a sampling strategy.
- S14 Basic statistics & measures-**  
Use graphical analysis to understand distribution and stability.
- S15 Data analysis-statistical methods:**  
Identify data types and select analysis methods and tools. Assess time series data stability and analyse making relevant insight.
- S16 Process capability & performance-**  
Select methods and metrics for analysis.
- S17 Root cause analysis-**  
Select and apply the appropriate graphical tool dependent on the data type to identify patterns, trends and signals to establish a hypothesis.
- S18 Experimentation & optimisation-**  
Plan designed experiment with clear objectives, and appropriate levels of Measurement Systems Analysis, analyse experiment data and optimise.

**S19 Identification & prioritisation-**

Identify and prioritise factors, ideas and solutions

**S20 Data analysis – SPC-**

Select and apply appropriate tools for ongoing monitoring and control. Analyse and interpret control charts.

**S21 Benchmarking-**

Conduct structured benchmarking to support target setting

**S22 Sustainability & control-**

Identify failure modes and embed learning from improvements

## Professional Behaviours

### Improvement Practitioners demonstrate the following Behaviours:

**B1 Drive for results-**

Continuous drive for change and encourages others to deliver results across functional areas capturing and standardising best practice/

**B2 Team Working-**

Awareness of own and others' working styles. Creates high performing team.

**B3 Professionalism-**

Promotes a moral, legal and socially appropriate working manner, aligns behaviours to the organisation's values. Maintains flexibility to the needs of the project.

**B4 Continuous development-**

Proactively seeks and acts on feedback. Reflects on performance and has a desire for development. Adapts quickly to working with new situations/stakeholders/challenges

**B5 Safe Working-**

Ensures safety of self and others, speaks out to challenge safety issues



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