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Quality management — Guidance for quality tools and their application

Management de la qualité — Recommandations pour les outils qualité et leur mise en oeuvre

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Quality tools **1**
4.1 General 1
4.2 Review 2

5 Strategy **2**
5.1 SWOT analysis 2
5.2 PESTLE analysis 3
5.3 Porter's five or six forces 3
5.4 Vision and mission statements 4
5.4.1 Vision 4
5.4.2 Mission 4
5.5 Other relevant tools 4

6 Process approach and planning **5**
6.1 SIPOC/COPIS (useful for identifying processes) 5
6.2 Turtle diagram 6
6.3 Control plan 7
6.4 Flow diagram/swim lane diagram/cross-functional flow chart 8
6.5 Authority matrix/RACI/RASCI 9
6.6 Other relevant tools 10

7 Risk and opportunity **10**
7.1 SWIFT 10
7.2 Risk register/risk assessment 10
7.3 Failure mode and effects analysis (FMEA) 11
7.4 Traffic light/heat map 12
7.5 Other relevant tools 13

8 Objectives and objective management **13**
8.1 Kaizen 13
8.2 Hoshin Kanri (also known as the "X-matrix") 13
8.3 Management by objectives (MBO) 15
8.4 Other relevant tools 15

9 Customer focus/perception **15**
9.1 Quality function deployment (QFD) 15
9.2 Net promoter score (NPS) 16
9.3 Kano model 17
9.4 Pugh matrix / Decision matrix 18
9.5 Other relevant tools 19

10 Process performance **19**
10.1 Theory of constraints (ToC) 19
10.2 Value stream management (VSM) 20
10.3 Process wastes/muda 21
10.4 Work breakdown structure (WBS) 22
10.5 Spaghetti diagram 22
10.6 5S 23
10.7 Overall equipment effectiveness (OEE) 24
10.8 Production levelling (Heijunka) 25
10.9 Other relevant tools 25

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11 Inventory management/preservation **25**
11.1 Kanban 25
11.2 Just-in-time (JIT) 26
11.3 Other relevant tools 26

12 Detection and prevention **26**
12.1 Error proofing/poka-yoke 26
12.2 Visual aid 27
12.3 Cost of quality (COQ) 27
12.4 Other relevant tools 28

13 Process control tools **28**
13.1 General 28
13.2 Box plot 28
13.3 Pie chart 29
13.4 Radar chart/spider diagram 30
13.5 Pre-control 31
13.6 Critical to quality (CTQ) trees 31
13.7 Pareto chart 32
13.8 Gage repeatability and reproducibility (GR&R) 33
13.9 Other relevant tools 34

14 Corrective action/problem analysis **34**
14.1 Root cause analysis (RCA) 34
14.2 Decision tree 34
14.3 Fault tree analysis (FTA) 35
14.4 Five whys analysis 36
14.5 Fishbone/Ishikawa diagrams 37
14.6 Is/is not analysis 38
14.7 Other relevant tools 38

15 Improvement **39**
15.1 Benchmarking 39
15.2 Affinity diagram 39
15.3 Quality circles / QC circles 39
15.4 Brainstorming 40
15.5 Six Thinking Hats 40
15.6 Other relevant tools 41

16 Families of management tools **41**
16.1 Six Sigma programme 41
16.2 Total quality management (TQM) 42
16.3 Other relevant tools 42

Annex A (informative) **Overview of Plan-Do-Check-Act techniques** **43**

Annex B (informative) **Storyboard examples for quality tool application** **47**

Annex C (informative) **Summary of the attributes of quality tools** **51**

Bibliography **55**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Introduction

The quality of products and services delivered by an organization is achieved through the processes and procedures that constitute a quality management system (QMS). The function of a QMS is, in broad terms, to enable and ensure that the resulting products and services meet the desired objectives.

Quality tools are an integral element of a QMS. This document seeks to familiarize users with a range of quality tools that potentially have useful applications in a QMS as described by ISO 9001, and to assist in the selection of quality tools appropriate to the task at hand.

In this document, the term “quality tool” is synonymous with “quality techniques”. The range of tools that could be cited is vast. Therefore, the focus of this document is on tools that have seen successful application in a wide range of activities in diverse sectors, and to draw attention to some that can be relatively less known to some users. Statistical techniques are addressed in a separate standard, ISO 10017.

This document provides a brief description of each of the selected tools to assist the user in determining whether the tool has beneficial application in a particular context. The document also provides instruction on how the tool can be used.

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Quality management — Guidance for quality tools and their application

1 Scope

This document gives guidance on the selection and application of tools that can be used in a quality management system to:

a) characterize a process or a variable;

b) facilitate problem solving;

c) highlight areas for improvement;

d) improve effectiveness.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9000, *Quality management systems — Fundamentals and vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9000 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
quality tool
quality technique
method or procedure to perform an operation to achieve a quality objective

4 Quality tools

4.1 General

The quality tools described in this document have been arranged in approximate alignment with the sequence of the quality system requirements of ISO 9001. This structure is intended to help the user and does not imply priority. A listing of the tools in relation to the Plan-Do-Check-Act (PDCA) approach is provided in Annex A.

Annex B gives examples of how quality tools are used together as storyboards.

Annex C provides an overview of quality tools to guide their appropriate application.

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