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**Continual improvement – Methods for
quantification – Guide**

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Contents

	Page
Foreword	ii
0 Introduction	1
0.1 General	1
0.2 Methods and examples of recognized techniques	1
<i>Figure 1 — The CI spiral</i>	2
1 Scope	2
2 Normative references	2
3 Terms and definitions	2
<i>Figure 2 — CI steps</i>	3
4 Organizational context	3
5 Performing and managing CI	4
5.1 Define	4
5.2 Measure	5
5.3 Analyse	6
5.4 Plan	8
5.5 Improve	9
5.6 Control	10
5.7 Report	10
Bibliography	11

Summary of pages

This document comprises a front cover, and inside front cover, pages i to ii, pages 1 to 11, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 November 2019. It was prepared by Technical Committee MS/6, *Methodologies for business process improvement using statistical methods*. A list of organizations represented on this committee can be obtained on request to its secretary.

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As a guide, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification or a code of practice.

Presentational conventions

The guidance in this standard is presented in roman (i.e. upright) type. Any recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of The Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

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0 Introduction

0.1 General

The term “continual improvement” is often abbreviated to CI. This term is used in management system standards, against which certification can be achieved, but there is no guidance as to what constitutes continual improvement.

NOTE Examples of management system standards include BS EN ISO 9001, BS EN ISO 14001, BS EN ISO/IEC 27001, BS ISO 45001, BS ISO 18404 and BS EN ISO 13485.

The importance of CI to an organization in terms of financial benefits, efficiency and effectiveness is understood, but the term itself is not well-defined.

A good implementation of CI requires effective leadership, clear vision with objectives, skills, appropriate resources and a well-thought-through approach. Objectives can be to achieve tangible results such as financial benefits, or intangible outcomes such as cultural change.

Before CI is first introduced into an organization, the organizational leadership needs to decide the scale and scope of the introduction. A readiness assessment or organizational health check can be undertaken to determine the appropriate approach to be taken. These assessments would consider factors such as stakeholders and relationships, leadership and culture, strategy and purpose, systems and processes, capacity and capability, and communications and engagement. Pilot area(s) can be chosen and a roll-out plan determined. Generally, a model is chosen for the application of CI to the activities planned.

Successful CI can involve a merger of concepts from core improvement disciplines – for example, a merger of DMAIC (Define – Measure – Analyse – Improve – Control), PDSA (Plan – Do – Study – Act) and project management.

A CI concept is cyclical in its nature, improving products or services towards an organization’s vision and aims. This cyclical time frame is dependent on the nature of the vision, the size of its aims, the organization’s readiness and the size of the organization.

0.2 Methods and examples of recommended techniques

Analyse – Action – Analyse (AAA) is where local knowledge within the organization is able to know what is happening and is able to alter conditions and recognize improvement. Not every CI activity needs to be signed off at a top management level; a skilled workforce can be empowered to control their environment. For example, supervisors in manufacturing control time to manufacture (productivity), reject/scrap rates and capacity of facilities. They deliver improvements – continually – as they are closer to their workspace and have greater direct control.

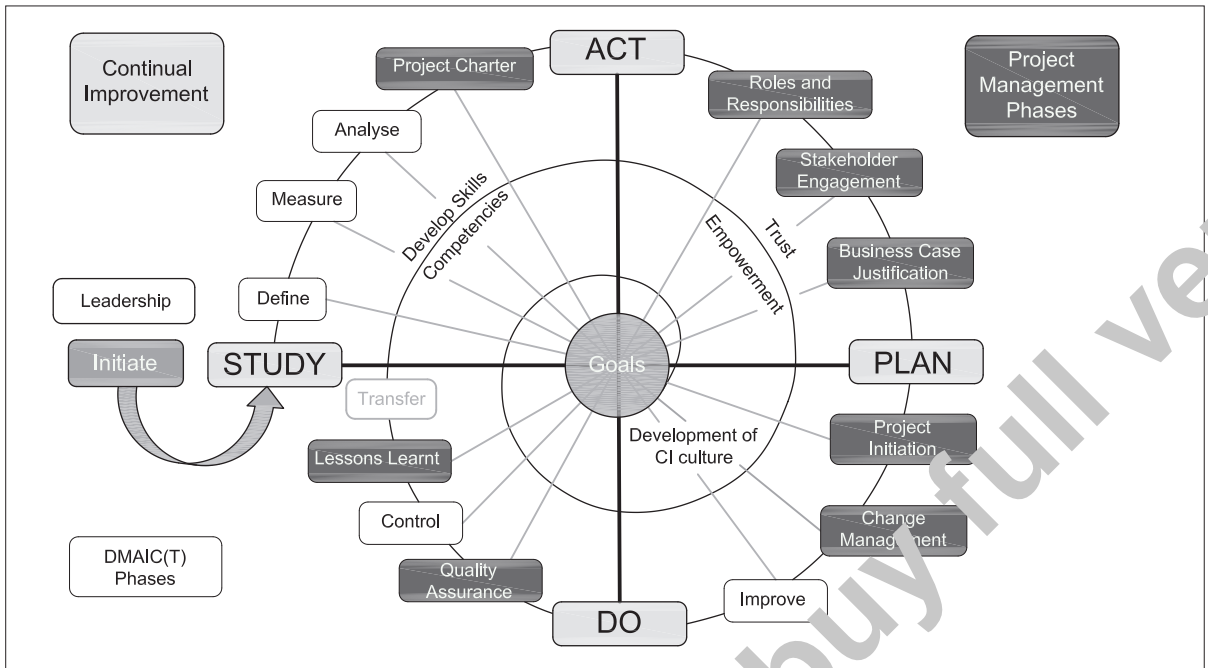
PDCA (Plan – Do – Check – Act) or PDSA (Plan – Do – Study – Act) can be a better method to use when working across different local departments and involving more resources that take longer to organize than AAA. The time to complete an activity with this method is expected to be longer but also reflects the size and magnitude of the goal of the activity. PDCA/PDSA methods reflect a cyclic nature – a repeating series of activities.

DMAIC is a method that could better suit larger activities across organizations not necessarily in the same location, or an activity that could involve different departments under different hierarchies that all have to manage their resources in a timely manner to contribute to the success of the CI activity.

These methods are not definitive and would be matched to suit the magnitude of the activity and knowledge of CI team members.

[Figure 1](#) shows how different concepts can merge to create a model for CI.

Figure 1 — The CI spiral



1 Scope

This British Standard is intended to assist organizations to undertake continual improvement activities and demonstrate results and achievement by giving examples of methods and practices, including measurements, results and techniques.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this British Standard, the following terms and definitions apply.

3.1 continual improvement (CI)

ongoing improvement in performance or system infrastructure, achieved through repeated iterative application of improvement cycles

NOTE Figure 2 illustrates the steps to continual improvement.