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Quality management systems — Managing an organization for quality results — Guidance for realizing financial and economic benefits

Systèmes de management de la qualité — Gestion d'un organisme pour des résultats qualité — Recommandations pour réaliser des bénéfices économiques et financiers

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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 documents 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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 176, *Quality management and quality assurance,* Subcommittee SC 3, *Supporting technologies*.

This second edition cancels and replaces the first edition (ISO 10014:2006), which has been technically revised. It also incorporates the Technical Corrigendum ISO 10014:2006/Cor 1:2007.

The main changes compared with the previous edition are as follows:

— it incorporates changes in ISO 9001:2015 quality management principles, rationale and concepts;

— it has been aligned with ISO 9001:2015 and complements ISO 9004:2018;

— the content of the document has been simplified, notably with respect to terminology and structure, to make it more readily understood and applied by the interested parties, primarily top management.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is intended to be used by top management. It provides guidelines for realizing financial and economic benefits by applying a top-down structured approach. These can also be used to support other types of management systems such as environmental, or occupational health and safety. The structured approach monitors and manages key business and quality management metrics. Using validated metrics as indicators of business performance, improvement actions are taken by applying the quality management principles described in ISO 9000:2015 and the quality management system of ISO 9001:2015. The guidelines in this document can be applied to an organization before or after implementing ISO 9001:2015.

The quality management principles are:

a) customer focus;

b) leadership;

c) engagement of people;

d) process approach;

e) improvement;

f) evidence-based decision making;

g) relationship management.

Applying these principles throughout the organization is a strategic top management decision.

Financial benefits are realized within the organization by implementing and utilizing cost-effective management system practices based on the seven quality management principles. The resulting organizational and financial improvements are expressed in monetary form.

Economic benefits are achieved by:

— application of the seven quality management principles, which establish and enable a linkage between effective management and the realization of financial benefits, economic benefits and organizational goals (see Annex A);

— use of a structured Plan-Do-Check-Act (PDCA) continual improvement cycle, which identifies action plans based on data and information resulting from implementation of the process approach;

— adoption of the quality management principles in daily operating practice, through:

  — effective management of resources;

  — implementation and monitoring of management system processes to improve the overall effectiveness and efficiency of the organization.

Financial, economic and organizational benefits resulting from the application of the principles include, but are not limited to:

— improved net revenues;

— improved budgetary performance;

— reduced costs;

— reduced business risks;

— improved cash flow;

— improved return on investment;

— improved retained earnings;
— increased competitiveness (market share);
— improved customer retention and loyalty;
— optimized use of available resources;
— enhanced employee engagement;
— improved intellectual capital;
— optimized, effective and efficient processes;
— improved supply chain performance;
— reduction of unpredictable business results.

Quality management systems — Managing an organization for quality results — Guidance for realizing financial and economic benefits

1 Scope

This document gives guidelines for realizing financial and economic benefits by applying a top-down structured approach to achieving financial and economic benefits. The structured approach uses the quality management principles and quality management system described in the ISO 9000 family of management system standards to:

a) monitor and manage trends in key performance metrics;

b) take improvement action based on the observed metrics.

This document is directed specifically to the top management of an organization.

This document is applicable to any organization, whether from the public, private or not-for-profit sector, regardless of its business model, revenue, number of employees, diversity of product and service offerings, organizational culture, complexity of processes, place or number of locations.

This document complements ISO 9001:2015 and ISO 9004:2018 for performance improvements and provides examples of achievable benefits from the application of concepts in those standards. This document identifies associated practical management methods and tools to assist in realizing the benefits.

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 9000:2015, *Quality management systems — Fundamentals and vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9000:2015 and the following apply.

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

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

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

3.1
metric
verifiable measurement used for quantifying or evaluating a result

EXAMPLE Indicator; performance indicator; key performance indicator.

3.2
financial benefit
organizational improvement expressed in monetary form

Note 1 to entry: Financial benefits should be realized by implementing cost-effective management system processes.

3.3
economic benefit
benefit attained through the effective implementation of management system processes and resources to generate value and improve the health and overall worth of the organization and its relevant interested parties

3.4
dashboard
combination of numerical and graphical data displays used to present the performance and trends of key results

EXAMPLE Traffic light charts; Pareto charts; pie charts; trend charts.

3.5
best practice
method that has been proven to work well and produce the best results, and is therefore recommended to be adopted as a model

Note 1 to entry: A method described as a best practice has usually been tested over time and validated through repeated trials before being accepted as worthy of broad adoption.

3.6
process approach
systematic approach to management in which an organization identifies, monitors and manages its internal processes and their interactions

3.7
process owner
person with assigned responsibility and authority for a process

Note 1 to entry: The responsibilities of a process owner can include defining, developing and deploying the process, communicating with interested parties, measuring and monitoring the results of the process and continually improving the performance of the process.

3.8
benchmarking
activity of measurement and analysis that an organization can use to search for and compare practices inside and outside the organization, with the aim of improving its performance

Note 1 to entry: Benchmarking can be applied to policies, strategies and objectives, processes and their operation, products, services and the organization's structures.

3.9
leading indicator
metric (3.1) that gives an indication of expected performance

3.10
lagging indicator
metric (3.1) that gives an indication of past performance

3.11
productivity
ability to generate, create, enhance or deliver products, services and knowledge

4 Top-down structured approach to realize financial and economic benefits

4.1 Overview

This document provides a two-stage top-down structured approach to assist top management in identifying and realizing financial and economic benefits (see Figure 1). As presented in this document, this approach is generic and applicable to any process or ongoing business condition (see Annex B).

In Stage 1, top management is responsible for identifying areas for improvement. The information is then passed on to Stage 2 in the form of assigned actions to the process owners.

In Stage 2, the process owners are responsible for developing and implementing effective improvement plans.

This same approach should be used to sustain improvements and achievements. The financial and economic benefits are achieved by:

a) monitoring and analysing key performance metrics over time:

   — in the context of the organization;

   — that represent the changing needs and expectations of interested parties;

b) implementing improvement actions, based on the analysis of the metrics, using the quality management principles together with the organization's quality management system (see Annex D).

The quality management principles are supported by the process approach, the PDCA cycle and risk-based thinking.

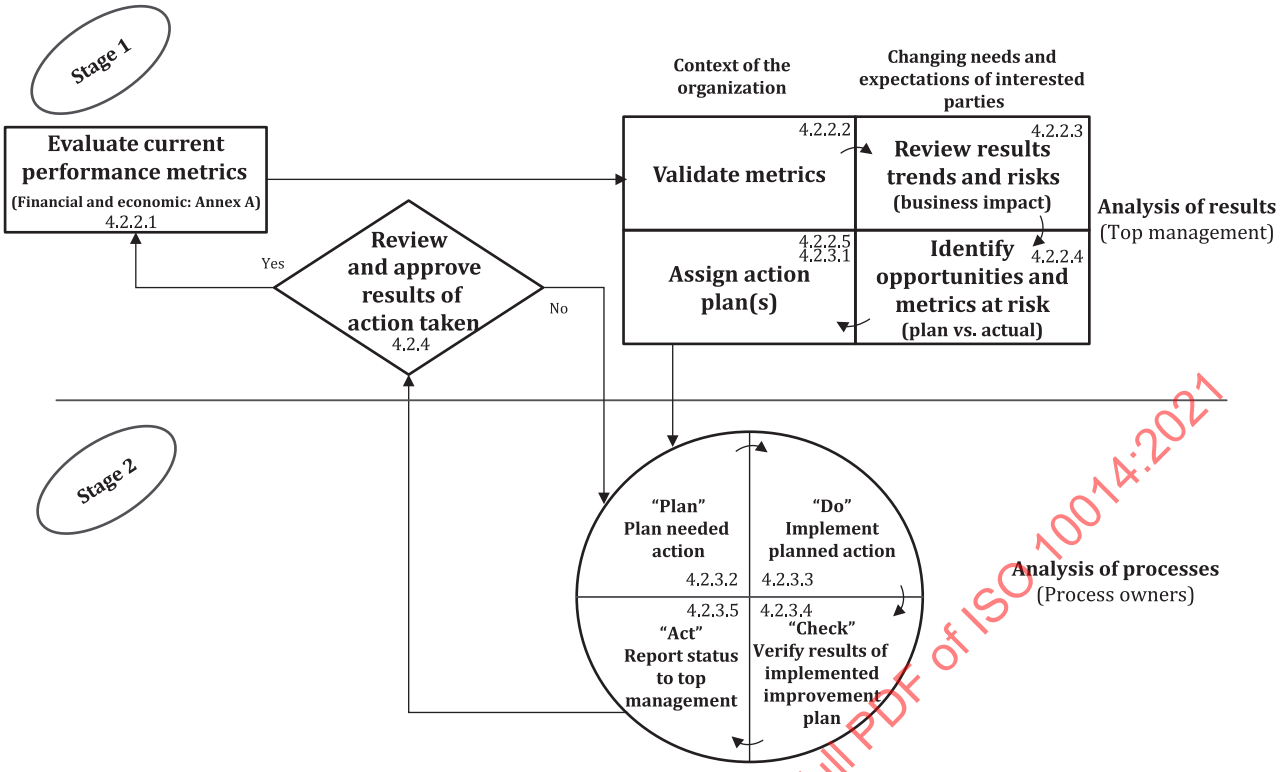
An organization should conduct an initial self-assessment, using the self-assessment tool provided in Annex C, to establish a baseline to assess how effectively it is using the processes detailed in this document. For organizations that have not yet developed a set of metrics and tools to identify and recognize risks and opportunities, they can start with the self-assessment tool in Annex C to identify gaps in their processes. As these processes improve, the organization will be in a better position to recognize opportunities for improvement through the evaluation of its business results.

Figure 1 summarizes the top-down structured approach for:

— analysing results important to the organization's financial and economic performance;

— identifying opportunities and metrics at risk;

— improving the underlying business processes.



NOTE Numbers refer to the related subclauses.

Figure 1 — Top-down structured approach for analysis of results and analysis of processes for continual improvement

4.2 Top-down structured approach

4.2.1 General

The approach for realizing financial and economic benefits is a two-stage process, as described in 4.2.2 to 4.2.4.

4.2.2 Stage 1 — Analysis of results

4.2.2.1 Evaluate current performance metrics

In Stage 1, top management starts by selecting a set of performance metrics.

NOTE 1 Particularly for small and medium-sized organizations, the performance metrics can simply be their financial performance reports.

NOTE 2 For organizations that operate as not-for-profit, the performance metrics can be their goals and objectives.

These metrics can include both leading indicators and lagging indicators.

Top management will then periodically review the ongoing performance of the organization's processes and business results against the baseline of the initial set of metrics (see Figure 1).

4.2.2.2 Validate metrics

The next step in Stage 1 is ongoing validation that the performance metrics selected by top management are relevant and useful. Validation should be conducted by correlating the performance metrics against

trends of overall actual business performance and confirming that the results provide meaningful and useful information on the performance of the management system.

4.2.2.3 Review results, trends and risks

This ongoing process will be an input to management's periodic review of performance as required by the quality management system (e.g. shareholder meetings, board meetings, management reviews). There can be synergies in reviewing all defined performance metrics and organization-level data during management review.

Metrics found to have either unacceptable performance levels or adverse trends are thus identified. Similarly, in this step, organizations can also identify metrics with exceptional results where there can be beneficial lessons learned which are applicable to other parts of the organization.

4.2.2.4 Identify opportunities and metrics at risk

The next step is to analyse the results and trends to identify those that are at risk. This analysis is performed against the organizational goals and expectations, including quality objectives. This should include a review of the processes where the metrics indicate that the processes are not performing as they should and are potential risks to ongoing performance.

For example, a performance metric that currently has acceptable performance levels but has an adverse trend over time can represent a future risk if the adverse trend is not addressed in a timely manner. Improvement actions should be identified to stop and reverse the trend (see Annex A).

Where process results are performing well against the organizational goals and expectations or trending favourably, there can be opportunities to share best practices across the organization.

Organizations should consider the use of simple graphical tools such as dashboards. For example, colour-coded “traffic light” charts can easily show trends. A metric in red colour indicates that the process needs immediate management attention, yellow (amber) colour indicates that the underlying process should be monitored more frequently, and green colour indicates that the process is operating satisfactorily. The specification limits for red, yellow and green should be established in advance to facilitate consistent communication.

Dashboards can include internal and external benchmarking to encourage organizations to achieve higher performance.

4.2.2.5 Assign action plans

After the analysis of results, top management should assign actions to the appropriate process owner(s). For metrics that indicate exceptional performance, top management can assign process owners to analyse the critical success factors, identify best practices and endeavour to replicate the process improvement successes in other areas.

For metrics showing unfavourable performance levels or adverse trends, process owners can be asked to identify the root cause of unacceptable performance, determine necessary resources and take action to reverse the trends or improve the performance of affected processes.

NOTE See ISO 10009 for guidance on root cause analysis.

4.2.3 Stage 2 — Analysis of processes

4.2.3.1 Introduction to the cycle

In Stage 2, process owners address actions assigned by top management resulting from the periodic review of organizational performance and business results (see Figure 1).

Once the actions are formulated, the process owners start improving processes as described in the PDCA cycle. Following this, they report improvement in the operation of the processes and changes in performance to top management for management review.

Details of the PDCA cycle for improvement of affected processes are described in 4.2.3.2 to 4.2.3.5.

4.2.3.2 Plan

Process owners who have been assigned by top management should develop improvement plans to address the results or trends identified. The plans should include:

a) analysis of root causes of the results or trends;

b) actions to manage risks and opportunities;

c) changes to be made to the quality management system;

d) resources needed to complete the plan.

Resources should include people, infrastructure, work environment, monitoring and measuring instruments, budgets, time available and communication tools.

For processes delivering unacceptable performance as measured against the selected performance metrics, the process owners start by planning for the improvement of those processes.

Identifying the processes that influence a high-level business metric (e.g. operation cost, net profit) can require a broader understanding of the overall business processes and the interactions between them. Understanding such interactions can assist process owners in developing a more comprehensive improvement plan.

4.2.3.3 Do

At this step, the process owner(s) should ensure that the plan is implemented as expected. This can require both management system and existing business resources.

Process owners should verify that the improvement actions have adequately addressed the root cause of the unacceptable performance levels or trends. For some processes, statistical control limits can be established to monitor the stability of the business process results. When the performance is improved and stable, results are reported to top management.

4.2.3.4 Check

At this step of the PDCA cycle, the process owners review the results of previously assigned actions to determine the effectiveness of the improvement actions and whether they can be sustained. Improved results are validated to demonstrate their impact on business performance.

4.2.3.5 Act

If the process owners are not satisfied with the results of the first pass through the PDCA cycle, they should consider repeating the cycle until the desired results are achieved.

Once the process owners are satisfied with the results of the assigned actions, they should consider other areas of the business where similar actions can be applied. At this point, the process owners will:

a) submit available evidence and results of the improved processes;

b) prepare a proposed improvement plan, including other areas of the organization;

c) report recommendations for deployment in other areas of the organization to top management for their review and subsequent direction.

4.2.4 Review and approve results of action taken

Top management will determine if the completed actions have produced the desired results and whether they can be sustained. If the results are acceptable, the cycle repeats beginning at Stage 1 (see 4.2.2.1). The set of performance metrics should be evaluated based on learning from previous PDCA cycles. They can be revised if applicable to facilitate the organization's ongoing identification, monitoring and response to continual improvement and the needs of the business.

Top management should also consider:

a) other similar areas of the business for ongoing improvement;

b) recommendations from the process owners.

If the results are unacceptable, top management should review the assigned actions to determine the reasons why. A new or revised action plan should be developed and assigned to process owners.

Metrics as an indication of improvements should be reviewed in the management review to ensure gains are sustained or to identify needs for future changes.

After the full implementation of the top-down structured approach is complete (see Figure 1), a reassessment should be undertaken (see Annex C). This is to evaluate the maturity and effectiveness of the deployment and to periodically assess improvements.

Annex A
(informative)

Financial and economic benefits, related metrics and linkage to quality management principles

Table A.1 presents examples of potential benefits and metrics and their link to the management principle.

NOTE See ISO 9000:2015 for a more detailed description of quality management principles and related benefits.

Table A.1 — Potential financial and economic benefits and metrics

Potential benefits from applying the quality management principles	Potential metrics	Management principle
Improved net revenues	— Gross income or revenue — Total expenses incurred, including material costs, labour, utilities, taxes and depreciation — Earnings before interest, taxes, depreciation and amortization (EBITDA) — Net income (profit and loss)	— Improvement — Evidence-based decision making
Improved budgetary performance	— Overall budget (cost) variance — Cost performance ratio	— Improvement — Evidence-based decision making
Reduced costs or expenses	— Budget and actual costs by major categories — Fixed versus variable costs ratio	— Process approach — Improvement — Evidence-based decision making
Improved cash flow	— Days cash on hand — Cash flow ratios — Free cash flow (FCF) — Discounted cash flow (DCF) — Mean time between completion of work, invoicing and receipt of payment	— Improvement — Evidence-based decision making
Improved return on investment	— Net income (profit and loss) — Investment in the organization, including stock and retained earnings — Time to payback — Return on investment (ROI)	— Improvement — Evidence-based decision making

Table A.1 *(continued)*

Potential benefits from applying the quality management principles	Potential metrics	Management principle
Increased competitiveness	— Market share (percentage of market attributed to the organization) — Time to market with new products or services	— Improvement — Evidence-based decision making
Improved customer retention and loyalty	— Customer satisfaction — Customer engagement — Customer loyalty — Total number of customers — Number of customers that routinely use the organization's products or services — Number of customer referrals to potential customers — Revenue from new customers — Customer complaints	— Customer focus — Leadership — Relationship management
Optimized use of available resources	— Productivity — Overall equipment effectiveness (OEE) — Return on assets (ROA)	— Process approach — Improvement — Evidence-based decision making
Heightened employee accountability	— Workforce engagement — Employee retention — Turnover rate — Absenteeism rate	— Engagement of people
Improved intellectual capital	— Patents submitted — Patents approved — Patents utilized to improve revenue from new products	— Engagement of people
Optimized, effective and efficient processes	— Process defects — Process time — Process scrap — Rework costs — Warranty claims — Cost of poor quality — Process capability indices (Cp, Cpk) — Return on net assets (RoNA)	— Process approach — Evidence-based decision making — Improvement
Improved supply chain performance	— Supplier timeliness (on-time delivery, just in time) — Supplier quality (zero inspection, zero defect, zero surprises)	— Relationship management

Annex B
(informative)

Examples of a structured approach to business performance improvement

B.1 General

This annex provides three examples (generic, small business and services) of an organization using the structured approach to business performance improvement depicted in Figure 1. The self-assessment tool in Annex C can be applied to all examples. Annex D can be helpful in understanding the relationship between the two-stage top-down structured approach and ISO 9001:2015.

B.2 Generic example

B.2.1 Stage 1 — Analysis of results by top management

B.2.1.1 Current performance metrics

Top management reviews the results of current performance of the financial and economic metrics as set out in Table A.1.

B.2.1.2 Validate metrics

Top management validates the following metrics from the pool of financial and economic metrics:

a) budgetary performance – variance from budget;

b) costs (overall, labour, administrative);

c) operating margin;

d) profit.

B.2.1.3 Review results, trends and risks

Top management reviews whether results are meeting expectations and trends are favourable. Top management identifies metrics at risk or non-performing, such as:

a) higher-than-expected budget variance due to an increase in operations cost;

b) lower operating margins and profits.

Top management assigns action plans to process owners responsible for addressing these metrics.

B.2.2 Stage 2 — Analysis of processes by process owners

B.2.2.1 Plan

Process owners take the action plans assigned to them by top management and do the following:

a) review the costs of relevant product and service offerings;

b) compile the costs and calculate the cost of poor quality;

c) identify specific plans to address cost of failures, for example:

— reduce internal nonconforming results on the highest margin product and service offerings by 20 % in the next quarter;

— reduce external customer returned nonconforming product and service offerings by 50 % by the end of the fiscal year;

— eliminate 80 % non-value added (NVA) processes in the high-volume product and service offering value stream by end of the fiscal year.

B.2.2.2 Do

Process owners implement plans to reduce nonconformities and NVA processes by implementing a methodology such as lean enterprise, six sigma, agile, or total quality management.

B.2.2.3 Check

Process owners verify the effectiveness of the improvement actions by checking whether:

a) the intended goals and objectives are met;

b) the gains are sustained.

B.2.2.4 Act

Process owners report the effectiveness of the improvement actions to top management (e.g. management review).

B.2.3 Back to Stage 1

Top management takes the following actions:

a) approve and recognize the improvement made, direct process owners to continue monitoring business results and determine whether the improvement is sustained;

b) if the progress made is inadequate, direct process owners to improve further;

c) evaluate any unintended consequences or new risks.

The continual improvement cycle continues. Top management adds, removes or refines metrics as the needs and goals of interested parties change, as the business expands, or as new challenges and opportunities emerge.

B.3 Small business example

B.3.1 General

This specific example is taken from a distribution of industrial chemicals and industrial cleaning services.

B.3.2 Stage 1 — Analysis of results by business owner (top management)

B.3.2.1 Current performance metrics

The business owner reviews the results of current performance of the financial and economic metrics as set out in Table A.1.

B.3.2.2 Validate metrics

The business owner validates the relevant metrics from the pool of financial and economic metrics. Examples include:

— profit;

— revenue of new products;

— age of receivables.

B.3.2.3 Review results, trends and risks

The business owner reviews whether results are meeting expectations and trends are favourable. The business owner reviews the risks.

The business owner identifies metrics at risk or non-performing:

— unacceptably high variance in prices of imported raw materials (external factor: due to exchange rate volatility);

— high concentration of revenue in 3 out of 90 offered products and services;

— most of the main customers pay within 90 to 120 days.

The business owner assigns an action plan to the process owner responsible for addressing these metrics.

B.3.3 Stage 2 — Analysis of process by process owner

B.3.3.1 Plan

The process owner analyses the causes of non-performing metrics. Considering these causes, risks, personnel resources and business process interactions, the process owner develops improvement actions for each metric.

Improvement actions with goals and objectives include:

— defining and effectively deploying policies for purchasing, quoting and collecting in foreign currency;

— sourcing domestically manufactured competitive raw materials to safeguard from high foreign currency fluctuations;

— planning and executing a strategy to improve new products and services with high revenue and profit margin in the organization's offering;

— making contract amendments to include staged advanced payments.

B.3.3.2 Do

The process owner implements the plans by making use of existing management systems and processes.

B.3.3.3 Check

Checks executed:

— verification of variance in prices of imported raw materials (price stability has acceptable variation);

— concentration of revenue (high or low) coming from the mix of offered products and services and the resulting profits;

— cash flow improvements due to revised staged payments.

B.3.3.4 Act

The process owner reports the results to the business owner (e.g. management review).

B.3.4 Back to Stage 1 — Approve action plan

The business owner:

— approves and recognizes the improvement made;

— continues to assess risks and assign process owners to address them as needed within the context of the organization and the changing needs of interested parties;

— recognizes or rewards the teams who reliably bring financial and economic benefits to the organization;

— continues the improvement cycle by refining metrics as the business expands, new challenges emerge and new opportunities present themselves.

B.4 Services example

B.4.1 Stage 1 — Analysis of results by top management

B.4.1.1 Current performance metrics

Top management reviews the current financial metrics:

— market share;

— profit.

B.4.1.2 Validate metrics

Top management relates top line metrics with secondary metrics within the context of the organization and changing needs and expectations of interested parties:

— market share impacted by customer satisfaction;

— how the costs (labour, operating, administrative, marketing) of a newly introduced service affect profitability.

B.4.1.3 Review results, trends and risks

Top management reviews dashboard showing trends:

— customer satisfaction trend is decreasing;

— newly introduced service has higher than expected costs.

Top management identifies metrics at risk or non-performing

— customer satisfaction decline is a risk to market share;

— higher service costs are a risk to profitability.

Top management assigns action plans to the process owners responsible for introducing the new service to mitigate these risks.

B.4.2 Stage 2 — Analysis of process by process owners

B.4.2.1 Plan

Process owners can use a wide range of quality tools and processes to complete the PDCA cycle. The cross-functional team that defined and introduced the new service defines the scope of the problem through Pareto analysis, fishbone diagrams, interviewing customers about the value of the new service to them and analysing additional metrics such as market penetration of the new service.

A temporary suspension of the new service is implemented to limit any further decline in customer satisfaction and mitigate the high costs of the service.

Using root cause analysis, the causes of the decline in customer satisfaction and the higher than expected costs for the service are identified and verified.

Specific plans are created to address the root causes.

B.4.2.2 Do

Process owners implement plans to improve customer satisfaction and reduce new service costs.

The customer satisfaction survey is revised to capture additional sentiments on the perceived value of the new service.

Cost-effective suggestions from customer surveys are implemented to improve the value to the customer.

Unexpected labour costs are reduced through enhanced training and automation of processes.

B.4.2.3 Check

Process owners verify the effectiveness of the service improvement and cost reduction programmes:

— customer perception of the service value is increasing;

— an evaluation shows that the training and automation will be able to sustain the cost reduction.

B.4.2.4 Act

Process owners report the effectiveness of the improvement programmes to top management.

Process owners:

— continue to monitor customer satisfaction and new service costs to monitor whether the business performance (market share) is improving;

— consider whether to repeat the PDCA cycle and make recommendations to top management;

— propose improvements to new service introduction process, including:

  — capturing employee and customer feedback prior to release;

  — supply chain readiness;

  — employee training;

  — cross-functional mapping;

  — identifying new metrics for the service;

— identify other areas where similar improvement actions can be useful and review existing metrics.