

Quality Group Practice Guides

Costs and Benefits Guidelines

Abstract

This note summarises the costs and anticipated benefits from a range of quality related activities in a tabulated style. The tables are divided into the following types of activity; set-up phase, getting certificated (ISO 9001), targets for improved project management, Quality System operation and Quality System & process improvements

Introduction

There is a lot of truth in the northern saying 'you don't get owt for nowt'. If an organisation wants to achieve benefits from applying good practices in its workplace, they cannot be achieved at zero cost.

It is equally important to recognise that, unless you enjoy 'banging your head against a brick wall', any initiative must make commercial sense, by that is meant that the benefits to result from the initiative must outweigh the costs.

Anticipated benefits should be derived from objectives such as (listed in the TickIT Guide, Issue 5.0, Part C):-

- Increased customer satisfaction and market share;
- Improved quality of end products (lower defect rates, increased reliability, increased accuracy of documentation);
- More competitive products and services (better and faster acquisition of customer current and future needs and expectations);
- Faster response time to market due to a shorter, yet more efficient development cycle;
- Increased flexibility in resource use (human and technological);
- Better executive control over key processes;
- More effective cascading of objectives;
- Simplified operations while improving product quality;
- Improved employee satisfaction (lower employee turnover);
- Better customer relationships (lower customer turnover).

The possibility of increased business is important but usually difficult to quantify.

Current levels and improvement targets should be quantified and all implementation costs should be declared.

This document should be read in conjunction with the following Quality Group Practice Guide:-

- How to Design, Implement & Maintain an Effective QMS Guide

Scope

The tables below itemise various quality-related activities and (in italics) the types of costs likely to be incurred. Directly opposite are shown the benefits that they are likely to deliver, in other words, the benefits of adopting an ordered, good practice, quality approach.

The tables are divided into the following types of activity:-

- Set-up phase;
- Getting certificated;
- Targets for improved project management;
- Quality system operation
- Quality system and process improvements;

In general terms, the organisation will need to spend money during quality system set-up and getting certificated. In these early stages, the benefits are unlikely to outweigh the costs. The major benefits will accrue later, more specifically from quality system operation, improved project management and process improvements.

Whilst it is not the purpose of this guidance to present absolute costings some ball-park estimates will be provided; it is however for the reader to refine these in the light of, and influenced by, a particular organisation's needs. Finally, we return to close the loop, so that we can confirm that a profit (benefit minus cost) will be made from adopting the approach.

Glossary of Terms

None	
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Costs and Benefits

First a word of warning, items included here may be seen as a benefit to one organisation but not to another, so in reading this section please try to relate what is said to your own organisation and circumstance before launching off into an enthusiastic implementation.

The section is presented as a table of costs, benefits and related benefits, the primary benefit from each is shown directly opposite but related benefits (although not exhaustive, provided as a general guide) are shown by use of other numbers in the adjacent column. Under the costs column the types of costs likely to be incurred are indicated in italics:-

Set-up phase

Activity and costs	Benefits	Related Benefits
<p>Quality/process planning</p> <ul style="list-style-type: none"> define quality objectives identify all processes that affect product or service quality <p><i>Time and effort will be expended by the quality team and the senior managers who provide assistance.</i></p> <p><i>It may also be appropriate to seek advice from external consultants.</i></p>	<p>1 Defines all the processes that need to be included within the quality system. The potential impact of some of these processes might come as a surprise</p>	<p>8 11</p>
<p>Process definition and documentation</p> <ul style="list-style-type: none"> include all processes that affect product or service quality <p><i>Time and effort will be expended by the quality team and other staff to capture processes and review them. External consultants may also be needed to assist.</i></p>	<p>2 Establishes the current Corporate practice.</p> <p>Helps to protect the company from the effects of key staff departing and taking knowledge with them.</p> <p>Allows easier uptake of new staff into use of company practice.</p>	<p>3</p>
<p>Quality manual/system publication</p> <ul style="list-style-type: none"> see ISO 9001:2000, clause 4.2 for quality manual scope and contents <p><i>Time and effort will be expended by the quality team to set up and distribute documentation or to create an internet/intranet-based 'electronic' system. A suitable system development/maintenance environment or documentation management system will be required</i></p>	<p>3 Establishes the 'style' of the organisation.</p> <p>Process documents are accessible to staff in the organisation by whatever medium suits best. Best practice would be to make the system electronically accessible. Doing so makes the processes easy to disseminate, update and configure. An important added benefit is that the system is largely invisible to the user and it appears less bureaucratic and more accessible</p>	<p>2</p>

Getting certificated

Activity and costs	Benefits	Related Benefits
<p>External registration</p> <ul style="list-style-type: none"> • pre-certification audit • certification audit • 6-monthly surveillance audits <p><i>Time and effort will be needed for the quality team and for a management representative to liaise with the certification body and prepare for the pre-certification audit. Many staff and senior managers will be involved in the certification audit itself and the subsequent 6-monthly (intervals of surveillance may vary depending on organization) surveillance audits. The certification body will charge a fee for their services.</i></p>	<p>4 A quality certificate provides a marketing statement to potential customers and confirmation to current and potential customers that a sound baseline of quality practices is in existence.</p> <p>Reduces and sometimes eliminates customer reviews of internal processes</p>	<p>10</p> <p>12</p>

Targets for Improved Project Management

Activity and costs	Benefits	Related Benefits
<p>Project planning</p> <ul style="list-style-type: none"> • see ISO 9001:2000 and ISO 9004:2000 <p><i>Time and effort will be expended by the project manager and senior project staff. Support tools may need to be purchased.</i></p>	<p>5 Should enable all resource requirements to be identified together with key milestone dates, the most important of these being product delivery.</p> <p>Provides focus for the project team and can provide a true baseline to facilitate measurement of progress.</p> <p>Enables a project manager to delegate tasks to task team members.</p> <p>Provides a means of communication and dialogue with management and customer</p> <p>Provides a confirmation of common understanding</p>	<p>8</p> <p>11</p>

<p>Risk management</p> <ul style="list-style-type: none"> • risk analysis • risk evaluation • risk control <p>Should be part and parcel of initial project planning and repeated as design progresses</p> <p><i>Time and effort will be expended by the project manager and senior project staff. Support tools may be needed to track identified risks.</i></p>	<p>6 Enables effort to be focused to resolve known risks.</p> <p>Allows a clear judgement to be made at all stages of the risks threatening a successful conclusion.</p> <p>Allows preventative mechanisms to be identified.</p> <p>Allows a sensible provision to be made to deal with any risks which materialise</p>	<p>1</p> <p>7</p> <p>11</p>
<p>Project reporting</p> <ul style="list-style-type: none"> • regular, for example weekly or monthly • at pre-determined milestones <p><i>Time and effort will be expended by project staff and line managers.</i></p>	<p>7 Provides management and the customer with the means to track progress being made.</p> <p>Provides a means of alerting management and the customer to problems or issues requiring attention</p>	<p>1</p> <p>8</p>
<p>Project monitoring</p> <p><i>Time and effort will be needed to review and track changes. Support tools may need to be purchased.</i></p>	<p>8 Allows actual progress to be compared with planned progress.</p> <p>Should result in the management of all the stakeholders' expectations with no surprises for anyone.</p> <p>Should enable the Project Manager to identify the need for remedial action</p>	<p>11</p>
<p>Design reviews</p> <p><i>Time and effort will be need to be provided by project staff and by technical experts either from within or external to the organisation.</i></p>	<p>9 Provide clear, expert and focused evaluation of an entity unhindered by the pre-conceptions of the designer/constructor.</p> <p>An 'entity' can be a design, a document, an item, a service, in fact anything produced by the organisation</p>	<p>1</p> <p>6</p> <p>7</p> <p>11</p>

Quality System Operation

Costs	Benefits	Related Benefits
<p>Management review of quality system operation</p> <p>planned intervals</p> <p>review objectives, inputs and outputs are quoted in ISO 9001:2000, clause 5.6</p> <p><i>Time and effort will be expended by the quality team in preparing data for the review and by senior management in carrying out the review.</i></p>	<p>10 Provides a formal means of checking that the quality system is meeting corporate objectives and that it is adequate and effective.</p>	<p>11</p>
<p>Metrics collection and analysis</p> <p><i>Time and effort will be expended by the quality team identifying suitable target measures, their collection and analysis. Tools may be needed to help track conformance. Operational staff will also be involved and must be committed to the process.</i></p>	<p>11 Provides a numeric means of judging product quality and the performance of key processes within the business so that targeted improvements can be initiated.</p>	<p>12</p> <p>16</p>
<p>Customer satisfaction surveys</p> <p><i>Internal and external effort will be required to conduct surveys. There must be a commitment to act on results.</i></p>	<p>12 Extends the concept of measurement to include customers. This enables a view to be obtained of the extent to which customer expectations are being met.</p> <p>Also provides means of judging product quality so that targeted input or process improvements can be initiated.</p>	<p>13</p> <p>16</p>
<p>Error reporting and management</p> <p><i>Time and effort will be expended by the quality team collecting data and tracking actions. The project teams will be involved in remedial activities. Tools may be needed to help track actions and review costs in determining action.</i></p>	<p>13 Provides a means by which the effect of recurring errors can be minimised or eliminated.</p> <p>Also ensures that errors are not forgotten.</p> <p>Ensures, in particular, that customer reported errors are addressed in a timely manner</p>	<p>15</p>

Quality System and Process Improvements

Costs	Benefits	Related Benefits
<p>Internal best practice training</p> <p><i>Internal and/or external trainers will be required. The non-chargeable time of those trained should be recognised.</i></p>	<p>14 Ensures that all staff understand how to use the quality system and best practice processes.</p> <p>Ensures that all staff use the same processes, enabling work to be moved from one staff member to another with minimum disruption</p>	<p>2</p> <p>12</p>
<p>Continuing improvement</p> <p><i>Time and effort will be involved in implementing the improvements.</i></p> <p><i>Time and effort will be expended by the quality team collecting data and tracking actions. Tools may be needed to help track actions and review costs in determining action.</i></p>	<p>15 Usually happens when picking up the issues arising from management reviews, auditing, error reporting and metrics analysis.</p> <p>Reduce cost/time by making processes more effective/efficient</p>	<p>2</p> <p>16</p>
<p>Major improvement initiatives</p> <p>target the processes that most affect added value first</p> <p>make sure the benefits justify the costs to be incurred</p> <p><i>Senior management effort will be required to review, agree and launch major improvement initiatives. The on-going project costs will mainly comprise staff time, hired-in consultants and new tools.</i></p>	<p>16 Probably essential if your best practice is to remain ‘best practice’ and keep in step with progress in the industry.</p> <p>Improved business performance and improved QMS.</p>	<p>6</p> <p>10</p> <p>13</p>
<p>Definition and tracking of Critical Success Factors</p> <p><i>Time and effort will be expended by the quality team and senior managers. It may also be appropriate to seek advice from external consultants.</i></p>	<p>17 Provides a clear focus of the vital aspects for an organisation to succeed and at the same time meet its customer’s expectations.</p> <p>Provides a means of judging the performance of key processes within the business so that targeted improvements can be initiated.</p>	<p>1</p> <p>2</p> <p>4</p> <p>6</p>

Closing the loop

An important step in any organisation is to make sure that the organisation will benefit from adopting any revised practices or even updates or improvements to these practices. These need not be direct benefits but might bring a benefit e.g. by improving customer satisfaction.

It is vital that each intended step is exposed to a vigorous examination of cost and benefit to demonstrate a black bottom-line from undertaking the initiative. If a profit cannot be shown, then the initiative should not be taken or should be re-thought.

There may be cases where there is no cost benefit. e.g. Statutory requirements

Further Reading

1. The TickIT guide which discusses an approach to software quality with respect to ISO 9001 certification in IT. www.tickIT.org