

Key concepts for quality management

SATRA's quality manager, JACQUELINE GLASSPOOL looks at some of the key concepts in quality management and assesses how they can be used in any production unit to improve quality assurance.

Within this article, we shall define 'quality' and examine the principles used when creating a quality management system, which is often abbreviated to 'QMS'. These principles are: i) customer focus, ii) leadership, iii) engagement with staff members iv) process approach, v) improvement, vi) evidence-based decision-making, and vii) relationship management.

The information presented here is applicable to all consumer products and the materials used in them. Therefore, it refers to everything from leather (from tanners), to adhesives, steel toe caps, footwear of all types, gloves and leathersgoods – including bags and suitcases.

It is important to also mention some of the formal management system standards, such as ISO 9001, ISO 14001, ISO 17025, ISO 45001 and SA 8000. A formal management system that is certified by an accredited organisation will provide confidence to customers and, in some circumstances, it is a prerequisite for tenders and contracts. However, provided the key concepts outlined here are followed, the use of a formal system is not always necessary to deliver a quality product.

What is 'quality'?

There are many different definitions of 'quality', one of these being 'the standard of something as measured against other things of a similar kind; the degree of excellence of something'.

The definition that SATRA uses for quality when describing products, goods or the provision of services is very simple – 'consistently meeting or exceeding a customer's requirements and

expectations'. In reality, however, this gets more complex – especially when it is considered that a customer's expectations will include price, delivery, appropriate product performance,

aesthetics and various legal requirements.

It also follows that a pre-requisite is to know and understand what any one customer wants. As we shall discuss



The quest for continual improvement should be emphasised by management right through the workforce

later, customer feedback is an essential part of any quality management system.

A QMS brings together activities by which a company identifies its objectives and determines the processes and resources required to achieved desired results. The system is then used to control these processes and resources, thus enabling top management to optimise the use of these resources, while taking into consideration the short- and long-term consequences of these decisions. Finally, it provides a means by which to identify actions that address intended and unintended consequences of providing products and services.

Key concepts

Key concepts of a QMS include continuous improvement (figure 1) and the use of tools – such as statistical process control (figure 2). It is now the norm within any management system to utilise a process approach (figure 3), with each part of the business being broken down into a discreet process with inputs and outputs. This allows the interaction between processes to be identified and incorporated into the business structure.

In footwear production, these processes might include design, purchasing, receipt of goods, processing of orders and the scheduling of production, as well as the various production processes themselves – for example, cutting, stitching, lasting, shoeroaming, packing and delivery.

For any QMS to operate well and to deliver the intended outcomes of meeting customer expectations and requirements, there has to be commitment throughout the entire company. This must start at the top with senior management, and filter down in what is known as a ‘top-driven’ approach. In order to achieve this, each person involved in a quality-related activity needs to understand how his or her actions can influence the overall quality of the final product or service, and be committed to delivering quality to the customer.

Finally, those responsible for quality management need to be able to act reasonably independently of either sales or production pressures. Of course, they need to be aware of the commercial consequences of any actions they take.

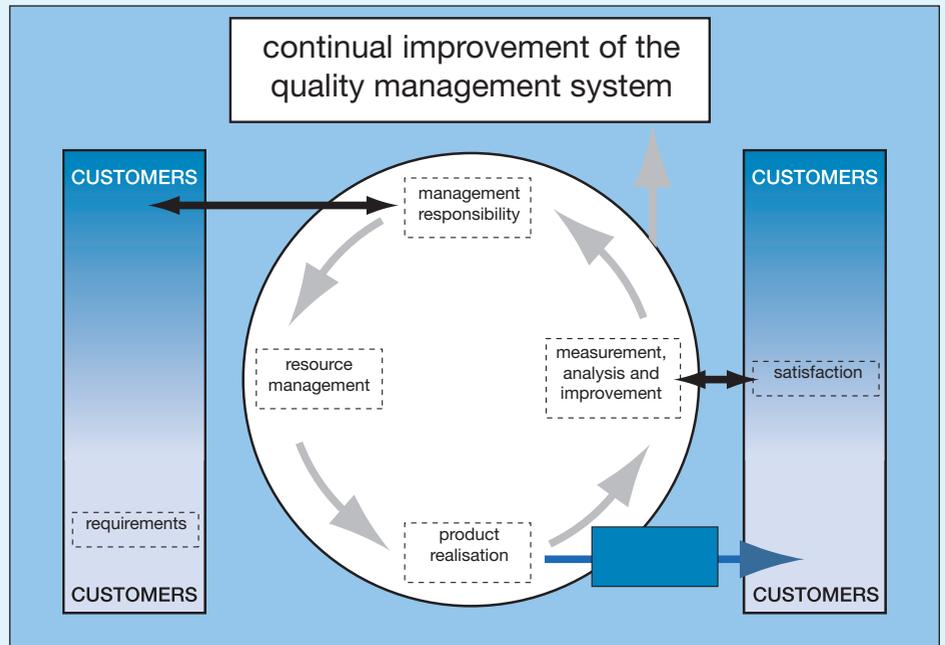


Figure 1: The correct route to managing quality in a professional manner

The principles of quality management

ISO 9001:2015 is built around a number of principles, which this article will examine briefly. These are introduced in ISO 9000:2015 – ‘Quality management systems – Fundamentals and vocabulary’, and SATRA advises any organisation wishing to introduce a quality management system to read this standard alongside ISO 9001:2015.

It should be noted that all of the concepts and principles used when creating a QMS are interrelated, and should be seen and used as a whole and not in isolation to each other. No one principle is more important than any other, and finding the right balance in the way in which they are applied at any one time is critical to the success of the system.

Principle 1: Customer focus

Companies depend on their customers, and the primary focus of any quality management system should be to strive to exceed customer expectations. It therefore follows that in order to achieve this, it is vital to understand current and future customer needs and requirements.

By doing this, a company will retain and improve the confidence of its customers and other interested parties. It will also see benefits in an increase in customer value and satisfaction, as well as an improved customer loyalty. This, in turn, will result in increased repeat business. The organisation’s reputation

will grow as customers share experiences, and this will lead to an expansion of overall customer base. The overall effect will be an increase in sales, market share and profitability.

In order to achieve a customer focus approach, the QMS will need to provide a platform that allows for an understanding of customer needs and expectations on such aspects as product range, delivery, support and price dependability.

There equally needs to be a balanced approach among direct and indirect customers and other stakeholders, including owners, suppliers, local communities and society at large. Once customer needs are established, these should be communicated throughout the company. Finally, there is a need to measure customer satisfaction and act on the results and feedback received.

Principle 2: Leadership Leaders establish the unity of purpose and direction of the company. They should create and maintain the internal environment in which employees can become fully involved in achieving stated objectives.

Effective leaders will ensure that the organisation’s mission, strategy, policies and procedures are communicated throughout its structure. They will inspire, encourage and recognise the contribution of the people around them, which will in turn establish a culture of trust and integrity.

Leaders will also provide the required resources, training and authority to allow their team members to act with accountability. They will also encourage a company-wide commitment to quality, while creating and sustaining shared values, fairness and ethical models for behaviour at all levels of the organisation.

A good leadership base within a company can result in an increased effectiveness and efficiency in meeting quality objectives, better coordination of processes, improved communication between levels and functions and greater capability of both the organisation and its work force to be able to deliver the desired results. In turn, this can increase customer satisfaction.

Principle 3: Engagement with staff members

In order to manage any company effectively and efficiently, it is important that people at all levels are respected and involved. Empowerment and enhancement of competence will result in full involvement, thereby enabling their abilities to be used for the organisation's benefit and in meeting its objectives.

Applying the principle of engagement of employees will result in individuals accepting ownership and the responsibility to solve problems, and actively seeking opportunities to make improvements. They will also enhance their competencies, knowledge and experience while freely sharing knowledge and experiences with others.

People will become enthusiastic and proud to be part of the company. They will derive satisfaction from their work, which will result in them wanting to focus on the creation of value for customers. This will better represent the organisation's objectives.

In order to achieve the above, a company will need to communicate with its team members in order to promote an understanding of the importance of their individual roles and the contributions they make. At the same time, workers' contributions, learning and improvements should be recognised and acknowledged.

Collaboration, open discussion and the sharing of knowledge should be promoted throughout all business areas and functions, while providing members of staff with the confidence to suggest initiatives without any fear of retribution.

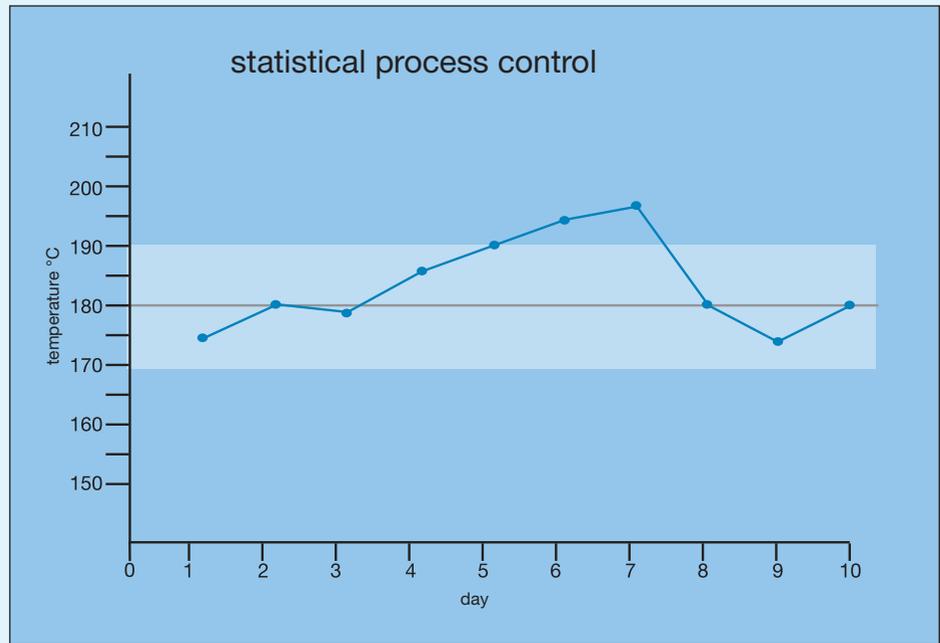


Figure 2: Platten press temperatures taken on a daily basis. The target is 180°C with an acceptable range of 170-190°C. On days six and seven, the process was effectively out of control and steps were clearly taken to make adjustments to rectify the overheating

One mechanism of achieving some of this is to assess employee satisfaction by means of a survey – analysing and communicating the results and by taking appropriate actions.

If done well, a company's people will contribute to the improvement of its policy and strategies. They will feel that they have shared ownership of its goals, which will allow them to be involved when goals are set and reviewed. From a human resource management perspective, team members will be more satisfied with their jobs and want to be grow and development for the organisation's benefit.

Principle 4: Process approach

Consistent and predictable results are achieved more efficiently when activities are managed as a set of interrelated processes that function as a single coherent system. As previously mentioned, a complete QMS consists of a number of interrelated processes, and having an understanding of how results are produced by the use of such a system will allow a company to improve the system, as well as product and services.

Workers will not only need to define the processes themselves, but must also identify the interfaces of these process. When designing new processes or making changes to existing ones, the process steps, activities, flows, control

measures, training needs, equipment, methods, information and other resources needed to achieve the desired result will need to be considered. This should be done in conjunction with an evaluation of the possible risks, consequences and impacts on customers, suppliers and other stakeholders of the process. Establishing clear responsibility, authority and accountability for managing the process is also important. The benefits that a company can see from a process approach are:

- an enhanced ability to focus effort on key processes and opportunities for improvement
- consistent and predictable outcomes through a system of aligned processes
- optimised performance through effective process management, efficient use of resources
- reduced cross-functional barriers
- being able to provide confidence to interested parties related to its consistency
- effectiveness and efficiency.

Principle 5: improvement Continual improvement should be a permanent objective for any company, and this is essential for maintaining current levels of performance. It also allows for a reaction to internal and external stimuli and to create new opportunities.



A company and its suppliers are interdependent, in line with principle 7 highlighted in this article

Worth remembering

There are a few well known maxims associated with a QMS that bear repeating. These are:

- ‘quality pays and poor quality costs money’
- ‘never try to inspect poor quality out – it is often easier (quicker and cheaper) to do a job right first time rather than doing it incorrectly and having to repeat the work’
- ‘know your customer, since each one is likely to be different’.

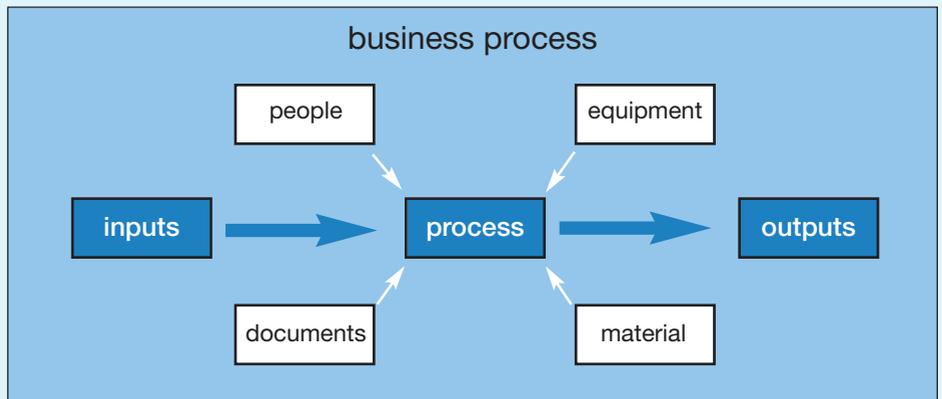


Figure 3: Personnel and other resources used together in the correct business process

Hence, there is a need to consider what is required in order to ensure that improvement is not only understood by everyone in the company but is also implemented. This is achieved by ensuring that continual improvement of products, processes and systems is an objective for every individual in the organisation.

Once improvement projects are agreed, processes need to be developed and used in order to ensure that they are implemented throughout the company. There should also be a means of tracking, reviewing and auditing the planning, implementation, completion and results of these projects.

Staff members at all levels need to be trained on how to apply basic tools and methodologies to achieve the improvement objectives. They should also be able to successfully promote and

complete the agreed improvement projects. An example of such tools is the ‘plan-do-check-act’ cycle (figure 4) of solving, process re-engineering and process innovation.

It is important to remember that the idea of improvement is considered and integrated into all areas of a company. This includes the development of new products, services or processes, or when changes are made.

Finally, it is important to recognise and acknowledge improvement – not only when the desired improvement has been achieved, but also when it has not. Any analysis should also consider the effect that the improvement has had on all areas of the organisation, and thereafter be implemented when considering new and future projects.

If used correctly, improvement can be an effective and useful part of a QMS

that will result in a number of benefits. These will include an improvement in process performance and organisational capability and, as a result, customer satisfaction and an enhanced ability to anticipate and react to internal and external risks and opportunities.

The company should also see an enhanced focus on root cause investigation, followed by prevention and corrective actions. These will result in a culture in which issues are not only corrected but effective measures are taken to ensure that they are prevented from reoccurring.

An enhanced consideration of both incremental and breakthrough improvement will be seen, in addition to an improved use of learning for improvement and a drive for innovation.

Principle 6: Evidence-based decision-making Effective decisions

are based on analysis of data and information, and are more likely to produce the desired result and outcomes. However, the decision-making process can be complex and it always involves some uncertainty. It also often involves multiple types and sources of inputs, as well as their interpretation, which can be subjective. When making decisions, it is important to understand 'cause and effect relationships' and potential unintended consequences. The use of data analysis, facts and evidence can lead to greater objectivity, and therefore confidence when making decisions.

Taking measurements and collecting data relevant to the objective is key to achieving the above. However, it is also necessary to ensure that any data obtained is appropriate, sufficiently accurate and reliable, and that it is accessible to everyone that needs to use it in a form that is understandable.

When analysing the data and information, valid methods and statistical techniques must be employed, and the members of staff carrying out the analysis need to be competent in the use of such methods and the evaluation of the results obtained. This will allow decisions to be made based on evidence, balanced with experience and intuition. As with all the other principles highlighted in this article, correct use of evidence-based decision making will result in a number of benefits. Some of these are an improved decision-making process, improved assessment of how the processes are performing and the ability of the company to achieve its objectives. This will lead to improved operational effectiveness and efficiency, an increase in the ability to review and change opinions and decisions, and the ability to demonstrate how effective past decisions have been.

Principle 7: Relationship management A company and its suppliers are interdependent. For sustained success, an organisation needs to manage its relationships with all interested parties, including suppliers. By doing this, the ability of both parties to create value is increased.

The rationale behind this is that relevant interested parties are able to influence the performance of a company. This may be in terms of if raw materials are supplied on time, whether sub-

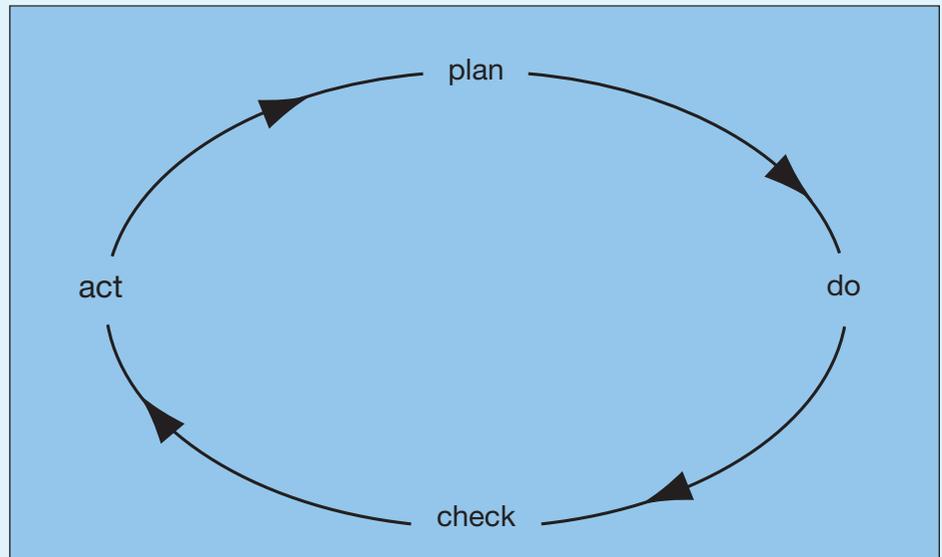


Figure 4: Evaluation and training are key concepts of continual improvement in this cycle of actions

contractors carry out work to the required standards or even if delivery companies used to ship finished goods operate to required timescales. An organisation's continued success is more likely to be achieved if it manages its relationships with interested parties in a way that has a positive impact on its own performance.

Some of the actions that can be taken to ensure good relationships with interested parties is the determination of all relevant interested parties – such as service providers, partners, customers, investors, employees, or even the local community. Once the interested parties have been identified, they can be prioritised into those where relationships need to be managed. This should be done on a risk-based approach that is linked to the influence or effect on performance that the interested party may have. Key suppliers should be identified and selected, and relationships then established that balance short-term gains with long-term considerations for the company and society at large.

This principle involves gathering and sharing information, expertise and resources with relevant interested parties, as well as measuring performance and providing performance feedback to interested parties, as appropriate. Improvement initiatives can then be enhanced.

Collaborative development and improvement activities with providers, partners and other interested parties can be established. Thereafter,

improvements and achievements by providers and partners should be encouraged and recognised.

The benefit of using this principle will be an enhanced performance by the company and its relevant interested parties, through its ability to respond to the opportunities and constraints that relate to each party. It is important to gain a common understanding of objectives and values among interested parties, and increase the organisation's capability to create value for interested parties by sharing resources and competence and managing quality-related risks.

Finally, the company should have a well-managed supply chain that is able to provide a stable flow of products and services, that meet the needs and requirements of the organisation.

How can we help?

SATRA has a wealth of experience on the implementation and operation of a variety of management systems, including those aimed at quality. We can offer UKAS-accredited certification for all footwear and related industries for ISO 9001:2015. Please contact the scheme manager on the email address below for more details.



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