

# Quality Goals in Technical Documentation

## Why do we need quality ?

Technical documentation is made for users and users have certain expectations regarding a product and the related documentation. Every technical consumer good has to be accompanied by an operating manual. In many countries, legislation requires that the manual has to be translated into the national language. There are several quality standards and directives issued by national and international standards bodies and the EU.

The users' expectations can differ significantly according to the market where a product is distributed. Some products are mainly sold on the national market where users might be less demanding or more reluctant to complain. When exporting a product, the manufacturer or vendor has to take into account that customers in the target country might be more prompt to complain or even sue the manufacturer in case of problems or damage. Quality standards might be higher and legal requirements might be more strict. In most countries there are consumer organisations carrying out a wide range of tests. The results are usually published in magazines and can have a strong impact on the users' opinion.

## What is quality ?

According to ISO 8402:1994, quality is the total combination of features of a product or a service ensuring its ability to perform specific functions. This definition was mainly focused on the product. This standard was withdrawn in August 2000 and replaced by ISO 9000:2000. This international standard describes the fundamentals of quality management systems.

In addition to ISO 9000:2000, ISO 9001:2000 specifies requirements for a quality management system where an organisation needs to demonstrate its ability to consistently provide products that meet customer and applicable regulatory requirements, and aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements. (Source: <http://www.iso.ch/iso/en/> , December 2003)

According to ISO 9001:2000, quality is the extent to which the inherent features of a product meet specific demands. This definition is more focused on the user whose expectations have to be taken into account.

## Who defines quality goals ?

In a sellers' market, where the demand exceeds supply, the manufacturer defines the quality goals. In a buyers' market, that is to say a saturated market where supply exceeds demand, the customer defines the quality goals. Since the latter is the current situation, meeting the users' demands is essential for competitiveness.

Some of these demands are explicit, some implicit. Explicit quality criteria refer to the price, the functions, and the design of the product. The expectation to have a good and understandable manual is rather implicit. The customer usually won't ask to see the manual before buying a product but he or she will probably take for granted that the manual will enable him or her to use the product easily and help him or her to solve problems when they occur. If this is not the case, the user will be convinced that the product doesn't work, even if the product itself is not defective.

## Product quality

When we speak about product quality, in general, we only think of the product, instead of thinking of the product plus technical documentation as two integral parts of the same thing. This is due to the fact that the manual doesn't influence the purchase decision. Usually the manual is not displayed together with the device in the shop. With regard to capital goods, technical documentation is not necessarily part of the contract of sale. That is why many manufacturers consider technical documentation as an unavoidable evil

they inevitably have to do but in which they are reluctant to invest too much time or resources. The general opinion is that good technical documentation only increases production costs.

From the customers' viewpoint, however, product and technical documentation are inseparable from each other. The instruction manual has a decisive influence on the evaluation of the product by the user. The product is evaluated when or after using it. The evaluation criteria go beyond the criteria for the purchase decision. They include not only the features, functions and design of the product, but also delivery time, packaging, easy or complicated installation, after-sales services and, of course, the usability of the product. Instructions for use need to be complete, clear, readable and structured in a way by which the user finds the required information easily and quickly. Otherwise the user will not be able to use the product as he or she wishes to and in his or her eyes the quality of the product is bad. Investigations have shown that 70 % of all complaints made by customers don't refer to the product itself but to related services. This includes operating manuals. The evaluation of the product by the user will influence his or her purchase decision the next time he or she has to choose. Therefore, technical documentation is an important factor for customer satisfaction and customer loyalty. It is therefore evident that technical documentation is an important marketing instrument.

Consumer organisations approach a product from the user's viewpoint and when they test a device, the manual is usually tested as well. For consumers, the test results are often a very important and trusted source of information before taking a purchase decision.

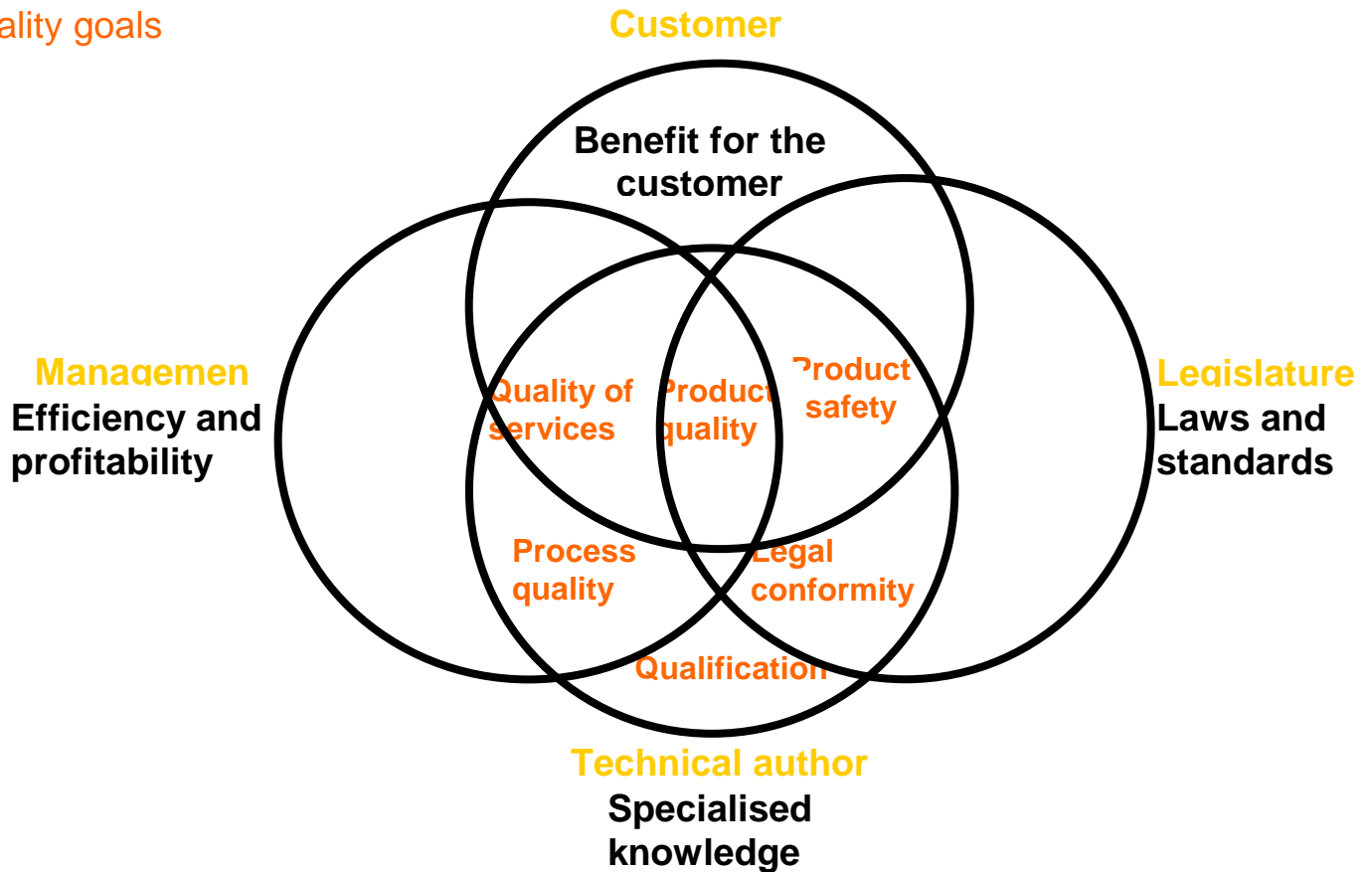
For manufacturers, good quality helps, in the long run, to reduce costs. The better the product quality, the less they have to invest in after-sales services, customer support through hot-lines or help desks, repairs and so on.

## **Interest groups and their quality goals**

When we speak about quality in technical documentation we have to be aware that there are different interest groups involved representing different requirements and quality goals. Their areas of interest partly overlap, and each group has a particular quality goal:

- |                |  |
|----------------|--|
| - Legislature: | Legal conformity                                 |
| - User:        | Product quality, product safety, service quality |
| - Management:  | Process quality                                  |

Viewpoints,  
Requirements,  
Quality goals

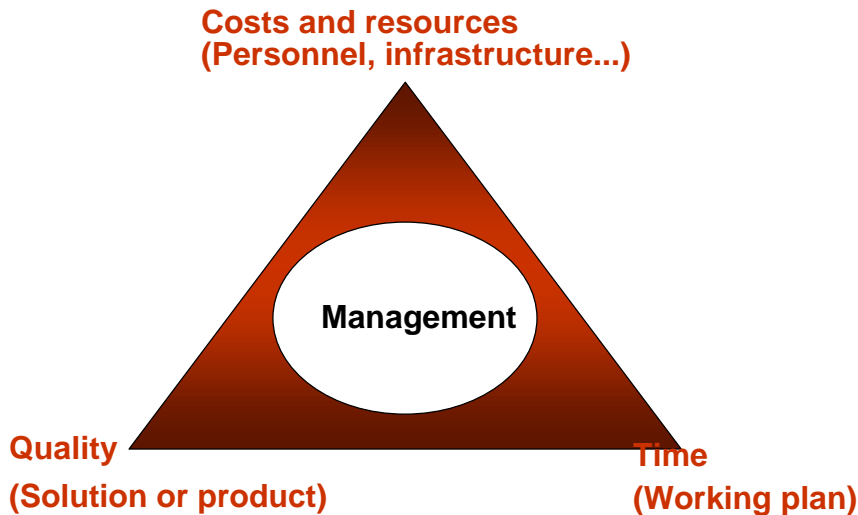


The technical author has to comply with all these requirements. Technical authors therefore hold a key position between the different interests groups. To fulfil their tasks they need to have access to tools and technologies and all the relevant information. Apart from this they need specialised knowledge and qualification. tekomp has defined a series of qualification modules that include: Internal and external technical documentation, research and investigation, project planning, writing and text production, structuring and standardisation, SGML/XML and Single-Source-Publishing, legal requirements and standards, layout and document design, visualisation and digital processing of images, on-line and multimedia documentation, data bases, quality management, soft and hardware, internationalisation, and printing.

The networking project TecDoc-Net, which is supported by the EU, aims to promote the job profile of technical authors and the development of study and training programmes in Europe. For more information visit: <http://www.tceurope.org/tecdocnet/abouttheproject.htm>

## Process optimisation

For manufacturers as well as for documentation service providers, process quality is one of the main goals and is a precondition for to maximise product quality within the set parameters of resources and time. The so-called “magic triangle” made up by these three factors implies that the higher the quality, the more resources and time have to be invested:



In this triangle, only the mere production costs are taken into account. These supposedly increase according to the increase in quality costs. Quality costs are, however, the sum of different cost types that go beyond the mere production process:

costs for prevention of errors  
 + costs for quality control  
 + costs for removal of errors  
 = quality costs

As the graphic below shows, quality costs decrease, when there is more investment in prevention of errors and quality control, because then, the costs for removal of errors can be significantly reduced. Removal of errors includes not only errors during the production stages but also the solution of problems after having sold the product. These range from customer support, after-sales services, complaints, repair, recalling a defective product from the market, compensations in case of damages etc. There is an optimum where the total quality costs are the lowest possible, when costs for quality control start to decrease, costs for prevention of errors are still moderate and costs for removal of errors are approaching zero.

This optimum can be reached through process optimisation. Regarding the processes in a company we can distinguish between four categories of "activities". In an average, efficient company, the distribution of working time per person invested in each one of these categories is as follows:

- |                                |  |
|--------------------------------|--|
| Productive activities (~ 25 %) | → Productive profit<br>(Text production; graphics, illustrations)  |
| Support activities (~ 45 %)    | → Neutral profit<br>(Process management)                           |
| „Blind“ activities (~ 20 %)    | → Neutral profit / missed profit<br>(waiting periods; double work) |
| Errors (~ 10 %)                | → Losses<br>(Removal of errors, Waste, defective products)         |

In an average, efficient company, 30 % of the working time is spent on "blind" activities and errors that generate no profit or even losses. The process management has to be focused on activities or aspects of the processes within the company that represent missed profit or losses: "blind" activities and errors. How can errors, waiting periods and unnecessary double work be avoided? Drawing up a detailed project plan helps. This project plan should contain deadlines and milestones, definition of authoring environment: tools, machines and software, definition of tasks and responsibilities, communication plan (who needs to

know what about the project, how do you make sure they find out, and when do they get the information?). Furthermore, processes should be standardised. The technical documentation department should be involved as early as possible in the development, design and production stages. A continuous information work flow between departments helps to avoid errors or to discover and remove errors as soon as possible. A standardised layout and terminology guarantee consistency. Usability testing is the best way to find out whether a manual is good. A practical guideline with step by step instructions, tips, information on legal requirements and references to standards and directives is currently being created in the project SecureDoc.

## **SecureDoc guideline**

This guideline has been produced in co-operation among delegates of the national organisations for technical communication and consumer organisations with the support of the EU. The official release will be at the 4<sup>th</sup> **European colloquium for user-friendly product information on 29 March 2004 in Brussels**. A PDF document will be available from January 2004 on <http://www.tceurope.org/securedoc/abouttheproject.htm>