

**55<sup>th</sup> EOQ Congress**  
World Quality Congress  
Budapest, Hungary - June 20-23, 2011

"Navigating Global Quality in a New Era"



---

**June 21, 2011 (Tuesday) 55<sup>th</sup> EOQ Congress**

---

**CONCURRENT SESSIONS**  
**KEMPINSKI HOTEL CORVINUS**

**Tuesday 13:30 – 17:30**  
**Erzsébet tér 7-8, Budapest V.**

---

---

**REGINA BALLROOM III.**

**Tuesday 13:30 – 15:00**

---

## **12.1. MANAGEMENT OF QUALITY OR QUALITY OF MANAGEMENT I.**

**Session Chair:** *Lars Sörqvist, Sandholm Associates and Royal Institute of Technology, Sweden*

### **13.30 Leadership and Management for Quality – LMQ**

*Asbjørn Aune, Norwegian University for Science and Technology, Norway*

**Aune, Asbjørn** (Norway)

Professor emeritus, Norwegian University of Science and Technology, Trondheim, Norway; Honorary member of the Norwegian Society for Quality.

In 1973 he initiated to establish the Norwegian Quality Award; later he introduced Quality Circles to the Norwegian industry. In 1986 he conducted a 6 days course on Quality Management in Beijing, China; in 1987 he initiated the World Quality Day. 1978 – 96 he was board member of the Norwegian Society for Quality (NFK). Beginning from 1985 he has been invited member of the International Academy for Quality (IAQ) and between 1991 – 93 he was the Vice President of IAQ.

He is author and co-author to 15 books, more than 100 articles in various journals and 45 international papers.

# Leadership and Management for Quality – LMQ

Professor emeritus Asbjørn Aune  
Norwegian University of Science and Technology (NTNU)

## Introduction

I am a bit astonished over expressions having coherent meaning. An example is “Lean production” and “TQM.” As I see it more than 90% is about the same thing. People speaking about Lean Production underline the differences, and those talking about TQM do the same. In a Norwegian journal there was an overview of ten “new” leadership tools for TQM, and Lean Management was one of them. (Not one of them mentioned the word *Quality*.) Lean management and TQM are very much the same. I want to use this opportunity to talk about *Leadership and Management for Quality* (– in fact meaning TQM), but LMQ is a better word because it means *giving priority to Quality*.

To me *Leadership* is both a *science and an art*. Leadership is for *the future* of a company, and cannot be based only on information and knowledge. No one has correct information about the future. *Management* is, in my opinion, mainly built on *facts and data*; and can to a large degree be made a *science* – an example is SPC.

## 1. Total-Quality Parameters

A decision to buy products/services does not depend on factors usually discussed in business press. The decision depends on the **quality of the product or the service**. To specify: To what “*degree for which a set of inherent characteristics fulfill requirements*”. We have to add: What might satisfy the customer’s needs (or wishes), included his *need for safety during use* of the product/service and its *influences on the external environment during use and destruction*. I must also add; which characteristics the customer identifies. No one is using the potential of a PC to a full extent.

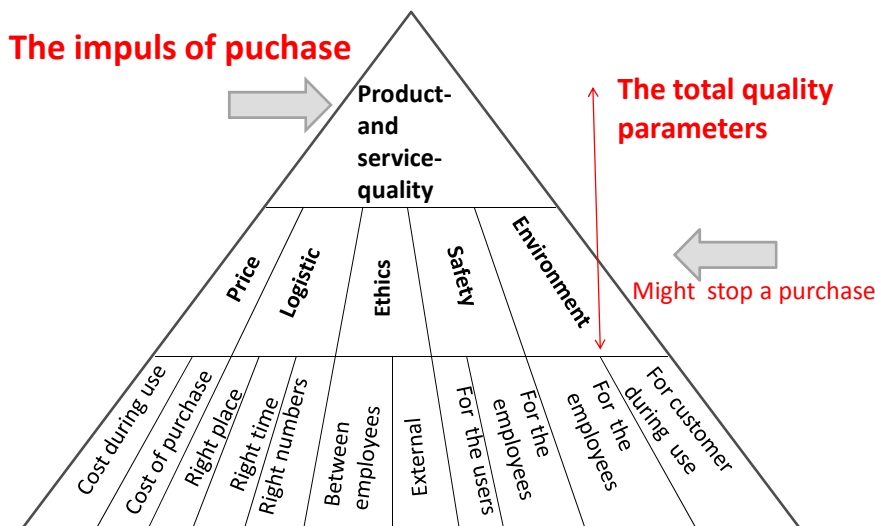


Figure 1. The impulse of purchase

The customers are *secondary* interested in the **quality of the producer or supplier** which they evaluate through: *Delivery (or Logistic)*: The product/service is present at the right time, the right place and in right numbers. This quality is also determined by the *physical safety of the employees*, *the work environment* and the company’s *ethics*. *Dissatisfaction with the producers/suppliers*

**quality** can **stop** any purchase. The *price* and the *expenses for use* can also do so. The customer evaluation of “*value for money*” depends on the parameters: *Price and the cost of expected use/Expected length of use*.

1. *The sum of the properties the customers have identified, release the decision to buy a product/service.*

The six parameters: *product quality/service, delivery, safety, environment, ethics and price* are here called **total-quality parameters**. Together with *the process technology, its condition (maintenance)* and the *employees competence*, decides the *magnitude of the stream of money* thorough the company. These parameters should be as important to the top leader as the economy.

To focus at the customer`s expectations and requirements is a prerequisite for optimal product properties, and to focus on the processes will result in the cheapest processes.

Today's and future products will have both *direct* and *indirect* customers. A person relaxing outdoor on a summer day, is an *indirect* user of the neighbor's lawn movers.

2. *Today's and future products will have both direct and indirect users.*

## 2. Global competition

Consumers and companies will be more demanding and less loyal due to raising competition. Both types of customers and the resource situation, requires the companies to deliver more and more *value for money*.

For companies to survive in old industrial countries with high cost levels, they have to deliver products of “*attractive quality*”, giving the customers *added value* not expected to the price. Or they have to be cheapest in price at an acceptable product quality. The alternative is to move to a low cost country – and perhaps have to move further some years later.

Many leaders – perhaps those without technological background - seem to ignore the value of “*silent knowledge*” among the employees. They have worked for the company many years. Perhaps those leaders are not aware of this knowledge, but it shows up when needed.

3. *No company will ever be remembered by the customers because of their economical results.*

Most leaders can get impulses from *world class symphony orchestras*. Berliner Philharmoniker is a good example. In that orchestra we expect that they play together, and excellently, various kinds of music. Music delivered by approximately 100 persons, all with top expertise in their various fields. They have to be lead by a person with visions and authority, but also with care and understanding for the individual members. All musicians, included the conductor, have to respect the *special sound* of the orchestra. The conductor must be able to motivate the individual, and lead a common development to be better, and to render maximum when it really counts.

No orchestra reaches world class if each member is playing soloist. Not by cost reduction either, or by “*out-flagging*” the production. Such an orchestra cannot raise the income or productivity by playing faster. They have to compete by the music and the presentation. *The requirement for quality is absolute. World class symphony orchestras exist in both large and small countries.* Business could learn about cooperation by studying world class orchestras.

4. *No company will for any long time have monopole on creating products and services, giving the customer most value for money.*

### 3. Adam Smith and the best for the common man

It is more than 250 years since Adam Smith wrote that under certain conditions it would be best to all people in the society – poor and rich – that business people concentrated on maximizing their own profit. The result: Adam Smith became the “capitalistic prophet”.

The last 30 – 40 years the marked liberalism has given us global free float of capital and short term capitalism, “*quarter capitalism*.” This form of capitalism is known for the owners to take out maximum profit and let others pay for the consequences. In Western countries the “common man” pays the consequences.

“Quarter capitalism” often ignores the rights of the customers, the work environment, the external environment and the society. Priority is given to the owners and the leaders. It has regularly given us larger and smaller economical crises which, to a large extent, have been paid for by the “common man.” Downsizing is also common in “Quarter capitalism”. Companies that are not profitable enough are often sold.

5. *At all times it is easier to sell out than to create new products and services.*

Income is more difficult to predict than costs. That is the reason why focus is directed to costs – meaning number of employees. Downsizing hurts because it ruins relations between people, common values, confidence and locality. When employees feel unsafe at work, the job satisfaction rate sinks, the confidence in the organization and the interest in the company diminish. In research- and development companies the negative effect of downsizing is large.

6. *Try all other possibilities before downsizing.*

The moral philosopher Smith's second main work “*Moral feelings*” from 1759 seems forgotten. In this book he describes which *ethics* he requires before his main thesis will function to the benefit of the common man. Smith most likely cared more for “the common man”, than for owners and leaders. He could not foresee today's “quarters capitalism” governed by ethics showing little interest for the individual human being and society.

7. *Adam Smith was not only the capitalism prophet, he was a moral philosopher.*

### 4. Ethic capitalism – “noblesse oblige”

Never before have so many people in industrialized countries lived as well as they do today. At the same time the difference between the really rich and the poor increases. The poor people in the same countries are becoming relative speaking poorer.

8. *Nobody, regardless of country, have advantage when the difference between the rich and the poor gets larger.*

The leaders of great companies and their major owners are today's “noblesse”. If they do not live up to the noblesse's old oblige to take care of those less fortunate, perhaps the capitalism as ideology might lose its trustworthiness among people. Even the fact that most of us will enjoy the fruits of capitalism, more and more people make a question-mark about the ways the profits are distributed.

The “quarter capitalism” - with one-sided emphasis on free capital flow to the benefit of capital owners - has to be replaced by an *ethical capitalism* build on: Trust from customers and employees and a will to keep promises. Further - that ecology is positive, that transparency and openness makes profit in the *long run*. Fair treatment of suppliers should also be mentioned.

9. "Quarter capitalism" should be changed to ethical capitalism.

### 5. Understanding systems – thinking as a whole

An organization can be seen as a mechanical, biological or social system. In a *mechanical system* the employees have different properties, but they are interchangeable as in a motor. In a *biological system* each employee can act on their own, but if the connection to the "brain" is cut off, the organization will not act optimal. In a *social view on the system*, an organization will function optimally when each employee feel that he is better in *this* organization than in any other. An organization will be functioning at best when the employees play together and no one feels he is better than the others, and they are allowed to make each other good in an environment of trust and acceptance. Any well balanced system can govern itself. The employees feel that by working just here they function optimally.

10. In a symphony- or chamber orchestra the most important work of the musicians is to make good music - not to be the best soloist.

### 6. Hoshin Kanri

Efficient *leadership and management* in a complex organization requires a common system of understanding. Regardless whether the company is product/service-, process- or function organized, you have to lead and coordinate the activities both *inside areas or departments* and *between "line"/"command" areas*.

This requires a *formal* organization – formal structures – for the main tasks which is called: "Daily routine Work" (DrW) and has to be managed and controlled per *area/department*. DrW is also responsible for *continuous improvement*. In addition we need *Cross Functional Management (CfM)* and *cross-function improvement*. The responsibility for *coordinating DrW* we find at the organization level immediate over (at CfM).

There will always be an *informal organization* shaping organizational culture, organization climate and traditions. This is an arena for footwork before formal decisions.

11. Common understanding and a social view on organizations is necessary for efficient coordination and leadership of DrD and CfM.

A challenge to most organizations is to be able to differentiate between problems arising from structural or organization-cultural problems. Often organization-cultural problems are tried solved by changes in the formal organization. As a leader you have to balance the formal structures and the culture of the organization.

### 7. New models for leadership

Talking about *natural and human capital*, there are no substitutes for consumption of such capital, meaning that all use of such capital cannot be correctly priced. There is no substitute for the social environment a family gets as part of living at the same place for 20 – 30 years. The leaders should show as much care for the employees and customers rights, as for their own salaries, pensions and end packages.

12. Problems concerning organization cultures are not solved by changing structure solutions.

In addition we miss a new *model for leadership and management* for offering goods and services for maximal expired value for customers/users, which will result in acceptable consequences for employees, owners and environment. Possibly we also need some new "rules of the game"; as antipollution, layoffs with insurance, and more, should be paid by the company.

13. *Tomorrow the companies have to manage their total capital in a sustainable way.*

### **7. A goal for leadership**

The business is paid for by the customers. It is the employees who create the values. Happy and safe-feeling employees are more creative and productive than unsafe ones. The investors are important because they, together with the banks, raise the money, but *they do not create the saleable values*. It is done by *product quality* which opens the possibility for higher income and the highest productivity – especially in older industrial countries.

14. *No customers – no trade,  
without employees – no value creation.*

### **8. Everyone desires quality**

Quality is often used in three meanings:

*Product- or user based:* The properties which fulfill the customer`s needs/requirements.

*Production based:* No failure – according to specifications/requirements.

*Based on feelings:* Something impossible to define, but worth to own – fist class.

People`s standard of living have always been depending on the quality of available products. Today quality is more important than ever, due to things that may go wrong. You might think of anything from medicines, aircrafts to food. The American specialist on quality, Dr. Juran, summed this up already in the 1970-ties: "The same way as the wellbeing of the people in the Netherlands depends on the physical dikes against the sea - the good life of all of us depends of Quality control dikes."

15. *Correct product/service quality means a safe and environment-friendly product/service, and correct process quality means failure free and planned standardized safe processes.*

Products and services of correct quality are pleasing the customers, and employees engaged in production also feel satisfaction in work. To deliver poor quality means waste of resources and should not be accepted in a world with limited natural resources.

16. *"Quality products" are an advantage for all nations regardless of the industrial level.*

17. *Quality does not happen on its own.*

### **9. Quality and economy**

It is difficult to decide to what extent the *product quality* influences the profit of a company.

But the customer will quickly forget the price when the quality is god. He will always remember the poor quality as long as he uses the product or suffer from a poor service.

18. *The annoyances connected with poor quality remains long after the pleasure of the low price is forgotten.*

Waste of resources happens in many ways. Production of too many pieces "to be sure", unnecessary work because the product is not fit for the process or vice versa, and unnecessary transport due to problems in the process, are three of them.



		Employees	
		Can see	Cannot see
Others	Can see	Obvious	Possible to hide
	Cannot see	Possible to conceal	Unknown (hidden)

Figure 2. Open and hidden waste.

Hidden waste will hardly be reduced without the actual employee being given some incentives for engaging in the improvement work. To reduce unknown waste, planned hours for improvement work will be needed.

Another kind of waste appears when the product/service is not adjusted to the market and is more or less non-saleable at full price.

*19. Waste can and must be prevented. What leaders accept will be the norm.*

### 10. Reporting poor-quality costs

*Preventing costs:* If individual failure preventing activities are a part of every employees work, those costs are included in employees normal wages. It has little relevance to report those wages as preventive costs. In addition depreciation and amortization of the investments for failure preventive activities can be difficult to separate from other investments.

It is not usual to see a direct correlation between the size of failure costs and the size of control costs. *The control cost* should be treated as follows: There is no optimal value for control costs. Those cost should *not* be reported to top leadership/top management. They are of interest to the quality function, production planning and/or line managers as indicators of possible improvements. Control costs ordered and paid for by the customer is no extra costs.

Semantically and psychologically there is an advantage if you define expected value for failure costs as zero. *Failure costs* accumulate without added value, result in lower productivity and should not be budgeted larger than zero. Top leaders must receive quick and reliable reports on failure costs, and they must be analysed regularly. Their largest value is that they show *trends* and *possibilities* for improvement. The *external failure costs* give an indication of how well the quality assurance system is functioning.

The *total poor quality costs* are more important than many other costs of same size *because they are unnessecary*. One dollar saved gives 0,90 or 0,95 dollar in profit.

*20. In many companies "the Gold in the Mine" or the Poor Quality Cost is larger than the stockowner`s profit.*

### 11. Changing to a new leadership

To change the leadership in the direction of LMQ (Leadership and Management for Quality) takes time, at least three to six years depending on the size of the company. You can use a Six sigma-model, an EFQM-model, an ISO-model, or you can use the model below:

1. Decision and infrastructure	2. Change the way of thinking	3. Dayliy rutine Work	4. Cross management Work	5. Topp leader`s evaluation
<ul style="list-style-type: none"> <li>• The decision</li> <li>• Search for infrastructure</li> <li>• Introduction of infrastructure</li> <li>• Long time plan for introduction 5W1H</li> <li>• Involvement from top leadership and delegated authority</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on customer/society</li> <li>• Work environment (3S, 5S, 9S)</li> <li>• Statements based on facts and data</li> <li>• Educating employees</li> <li>• Understanding the importance of theory</li> <li>• Deming wheel and the 4V-model</li> </ul>	<ul style="list-style-type: none"> <li>• Task and vision for each area (department)</li> <li>• Responsibility: Control and improvements</li> <li>• Internal customers</li> <li>• Products and services</li> <li>• Standardisation</li> <li>• Quality control and assurance</li> <li>• Creating standards</li> <li>• Evaluation and action</li> </ul>	<ul style="list-style-type: none"> <li>• Information and diagnosing</li> <li>• Vision</li> <li>• Processes</li> <li>• Strategies</li> <li>• "Frames" and directives ("roadmaps")</li> <li>• Distribution and adjusting</li> <li>• Standardisation</li> <li>• Plans</li> <li>• Carry out Hoshin-Kanri</li> <li>• Evaluation and action</li> </ul>	<ul style="list-style-type: none"> <li>• 3-generation report</li> <li>• Visit the places during evaluation (5B)</li> <li>• Possible correction</li> <li>• Planned breakthrough</li> </ul>
<i>Look for internal and external similarities</i>	<i>New mental modell</i>	<i>Work unit analysis. Control and continuous improvement</i>	<i>Process ownership and analysis. Cross-functional improvement and Hoshin Kanri - HK</i>	<i>Co-ordination of the organization</i>

Table 1. A model for changing to Leadership and Management for Quality – LMQ.