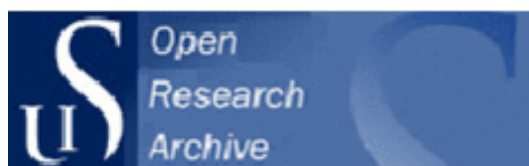




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Implementing Quality and Health/Safety Systems in the Hospitality Industry. A Comparison with the Aluminium Industry in Norway

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Abstract

This paper discusses mechanisms facilitating the implementation and merging of Occupational Health and Safety (OHS) management and Quality Management Systems (QMS) in the hospitality industry in Norway. An earlier study concluded that combining a quality system of food control with regulation of OHS seems to be a healthy recipe for the hospitality industry in Norway (Lindøe & Lie, 2002). This study goes a step further by addressing issues regarding the industrial context, industrial relations and active participation from all stakeholders. By comparing the implementation of QMS and OHS-management with the process in the aluminium industry what seems to be lacking in the hospitality industry is an implementation process rooted in the workforce where workers and safety representatives act as constructive and critical stakeholders. In both industries issues concerning quality will to a large extent be managed through market signals, whereas health and safety issues still need to be regulated and supported by the authorities due to lack of market influence. If the OHS-management is not to be institutionalized among the stakeholders in the hospitality sector there is a risk of degenerating from a healthy and dynamic participatory process to a bureaucratic management tool.

Keywords: Occupational health and safety management, quality management, small and medium size enterprises, workers participation

Introduction

The social production of wealth in modern society has been systematically accompanied with the production of technical, medical and social risks. Accordingly, many problems and conflicts relating to the production, distribution and redistribution of goods and services are related to Occupational Health and Safety (OHS). Improvements in health and safety at the work-place have traditionally been one of the main issues for unions due to the severe consequences of poor health and safety systems for workers (Walters, 2001). The dysfunctional effects of industrialization have forced governments to design OHS regulations as compensational mechanisms to the production systems (Frick *et al.*, 2000). Such governmental designed mechanisms imposed on enterprises from the outside, has contributed to improved OHS standards. But they have not been gratifying as instruments to institutionalize OHS issues as ordinary management tools at the enterprise level. On the contrary, health and safety issues have often been regarded as extra costs and additional bureaucracy from a management perspective. In many cases the OHS-organization has been a “side-wagon” to the ongoing management activities (Frick, 1994).

On the other hand, new fashions of management concepts and managerial discourses emerge on a regular basis (Barley & Kunda, 1992). During the 1980s, the “quality movement” made a strong impact, and many enterprises adopted concepts of “Quality Management Systems” (QMS). Quality issues have traditionally been a main issue for management and owners. Good quality has been regarded as a condition for long-time survival in the market and a source for extra profit (Edvardsson, Thomasson & Øvretveit, 1994). Many quality measures introduced by management have included increased control of work and workers, centralization of decisions or rationalization of production processes. QMS is also closely linked to methods for standardizing the production processes and products (Zweslot, 2000). Increased control, centralization and rationalization have often been regarded with a great deal of scepticism from the workers’ point of view, leading to alienation and increased work pressure (Tuckmann, 1994).

In a historical perspective, OHS and quality issues have been quite different things at the enterprise level, supported by different actors with different motives and ends. Consequently, the implementation of OHS and quality systems has also differed tremendously between industrial sectors. The hospitality industry (hotel and restaurant) has weak traditions when it comes to OHS, and also to some extent quality issues. The industry represents an old, but fast growing heterogeneous service sector with an unstable work-force and dominated by small firms (Dølvik, 2001). The companies are offering a diversity of products (accommodation and food/beverage) and service in local, national and international markets. Despite its traditions, this industry constitutes a labour market with lots of unregulated, irregular and often illegal arrangements, causing problems for the serious businesses within the sector. Union membership is only 28% – the lowest in Norway (Longva, 2001).

An earlier study concluded that combining a quality system of food control with regulation of OHS seemed to be a healthy recipe for the

hospitality industry in Norway (Lindøe & Lie, 2002). The conclusion was based on the development of formal management systems with indicators such as written goals and procedure, leaders in charge of OHS, housekeeping of laws, regulation, statistics, etc. The documentation and discussion in the paper is partly based on the former study (op.cit.) and that is reflected in parts of the text.

However, formal corporate documents as policy statements and descriptions often reflects “expoused theory” of action (Argyris & Schön, 1979) that may differ from how the enterprises act in practice. In this paper we go a step further by asking what external and internal factors that may explain success or failure in implementation of quality- and OHS-management systems. Issues discussed in the former study as market situation, the role of authorities, scale and resources (op. cit.) have to be developed further and with the industrial relations as a new dimension of the analyses.

As a basis of comparison for the assessment, we chose the aluminium industry which has been in the forefront regarding the implementation of both OHS-management (OHSM) and quality systems for at least the last 20 years in Norway (Tinnmansvik, 1991). This industry played a substantial role in the development of the new regime regarding OHS called “internal control-regime” for managing OHS (NOU 1987A; Lindøe 1992). Throughout one hundred years of operation, the industry has matured and appears homogenous regarding company size, modes of production, technology, markets and industrial relations, and has a high union membership. The enterprises are big and stable entities that operate in an international market with a high requirement in quality.

In Table 1 some characteristics of the two industries in economic terms, work force etc. are presented.

Two empirical studies

The two industrial sector studies were conducted at different times, using different approaches. The aluminium case study was part of a long-term

Table 1. Basic figures about the hospitality and metal producing industry¹ in 2001.

Characteristics	Hospitality industry	Metal producing industry
No. of enterprises	9 494	113
Turnover (million USD)	5 194	8 184
No. of employees	83 343	13 340
Gross investments (million USD)	248	425

(Source: Statistics Norway)

¹ The metal producing industry includes companies producing different types of metals. Seven of the companies produce aluminium. They are, however, very representative for the whole industry concerning size, technology, international markets, union membership etc.

Table 2. Two case studies – some characteristics.

	Aluminium Industry	Hospitality Industry
No. of enterprises involved	In-depth study in three of the seven plants	All members of the new hospitality associations (2250 companies)
Funding agency	National Research Council and Federation of Norwegian Enterprises	Federation of Norwegian Enterprises
Method	In-depth case studies	Survey and participatory process evaluation
Period	1990–1994	1997–2001

national research project organized to follow the introduction and implementation of the OHS management systems in Norway. A research team followed the development in three (of seven) plants from 1990 to 1994. The approach used was in-depth studies based on observations, interviews and document analysis.²

The Hospitality case study was conducted between 1997 and 2000 and included all the 2250 members of the Norwegian Hospitality Association. The newly formed association put quality and OHS management on the agenda and made it a part of their strategic plan (Lindøe & Lie, 2002).

A cross company survey designed as a “OHS-barometer” was carried out three times between 1997 and 2000 in order to monitor the implementation of OHS management systems, external environment issues, fire protection and food control among others. About 50% of the 2250 companies responded to the survey each time. A group of four to five enterprises in Oslo, Trondheim and Tromsø participated in developing management tools and guidelines. They became part of a participatory process evaluation in order to get a deeper understanding of the process of implementation (Finne, Levin & Nilssen, 1995, Olsen & Lindøe, 2004).

Although the studies are quite different in their approach, it is still possible to utilize the findings and identify some main generic features in the merging between OHS management systems and QMS. The methodology in each case is documented and verified independently (Lindøe 1992, Skaar *et al.*, 1994; Lindøe & Lie, 2002). The same factors (or variables) are observed in each case (the aluminium study served as input in the design of the hospitality case). In both cases, observations have been conducted over a long period of time. Still, it is not possible to make a strict comparison between the sectors due to methodological inequalities. Hence, similar findings in each study are used as indicators in the analysis.

² It was part of a national research program in which Rogaland Research was involved for five years. (See Claussen, Lindøe & Rasmussen, 1991; Claussen, 1992; Lindøe 1992).

The implementation and merging processes

The hospitality industry

In 1997, two hospitality associations in Norway merged into one with 2250 member companies. At that time, the new national OHS-regime based on internal control implemented in 1992 had only had minor impacts on the hospitality industry (Gaupset, 2000). For the hospitality industry the deadline for introducing the OHS-regulations was set to 1 January 1998, and the Labour Inspection was authorized to penalize enterprises which had not started the implementation before the deadline. Furthermore, the “Regulation on In-house control based on risk analysis to meet the requirement of the Food Control Act” was passed in 1994. Similar to the OHS-regulations, this act only had limited impact on the industry. Consequently, the members of the new association had only one year to implement the new regulation on Food Control and could also face the risk of being penalized for not implementing OHS management systems. To meet this situation, the new federation launched an ambitious program called “Extended Occupational Health, Environment and Safety” aiming to get 80% of the members to a level that could be accepted by the inspection authorities. The program was implemented in three stages.

The first stage involved motivation and training of management, whereas the second stage involved the employees. The third stage focused on safety for guests and employees. The program was introduced top-down from the association with enterprise management as the main recipients. This is also reflected in the special focus on food security and fire-safety.

Both the implementation of OHS management systems and Food Control showed substantial leaps during this period. However, the implementation of Food Control increased faster than OHS systems. In 2000, 68% of the member companies had implemented Food Control (compared to 12% in 1997) and 58% OHS systems (compared to 27% in 1997). A national survey covering all hospitality enterprises reported the implementation of Food Control to 72% in 2000 (Torvatn *et al.*, 2001).

Table 3. Status for the implementation of OHS management systems and Food Control in hospitality companies. Percent of companies (Lindøe & Lie, 2003)

	OHSM			Food Control			
	Implemented	Under way	Not started	Implemented	Under way	Not started	Not relevant
1997	27	43	30	12	45	35	8
1998	45	38	17	49	32	12	7
2000	58	26	16	68	16	8	8
2000*				72	19	9	

* Torvatn *et al.* (2001)

Results from the survey registered in the OHS-barometer showed relatively high scores among the members of the association in 2001. Almost 90% of companies had introduced a written agreement with all employees according to the Working Environment Act, and three of four enterprises had a safety delegate. During the four years implementing period, the self-reporting of OHS and Food Control issues had made a substantial progress. Seventy-five percent of the companies had access to relevant laws and regulations at the workplace, about 65% had formal agreements with the Occupational Health Service and collected statistical data for illness-related absence. Sixty percent of enterprises claimed that OHS systems were in place, while the remaining companies claimed that efforts were “under way”. The findings revealed considerable differences regarding scale. Within the smallest segment of enterprises (below 5 MNOK in annual turnover) less than half of the enterprises had started the process in 1997. Within one year three out of four enterprises reported that they had started the process. However, in the course of the following two years the process of implementation decreased and in 2000 two out of ten of the enterprises still seemed to be in a passive mode. Enterprises with 5 to 20 MNOK in annual turnover showed even better implementation in relative terms. Although the percentage of enterprises that had not started was reduced from 28 to 8 from 1997–98, the process stagnated over the next two years. In the group having 20 to 50 million in annual sales per year the implementation rate has steadily improved year by year. The picture is clear enough. For enterprises with less than 20 MNOK in annual turnover, a “saturation” occurs when it comes to the implementation. However, this category counts for among 80% of the members in the association and between 70 and 80% of the population covered in the survey.

The same picture is found regarding implementation of Food Control. In 2000, 60% of enterprises with less than 5 MNOK in annual turnover had implemented the system, while almost 90% of the enterprises with 50 MNOK or more had done so.

Even though there are no updated figures after 2000, it is likely that the rate of implementation of the formal OHS management systems has come to a halt, especially among the smallest enterprises. The assumption is supported by a Nordic survey (see Table 6) and the fact that the Labour Inspection has focused on continuously working with implementation rather than treating it as a “documented and final product”.

According to Lindøe & Lie (2002) external consultants and advisers played a key role in the program, especially in the promotion and communication towards smaller enterprises. With relevant skills acquired through many years of experience with the industry they were able to transform the “systems-thinking” and terms from the “rules and regulations” into meaningful and understandable terms for people on the shop floor. They seemed to be decisive both in communicating and motivating the members, and also in developing guidelines and practical checklists. When the new regula-

tion of Food Control was passed, the Food Control Authority gave priority to the hospitality industry. During 1999 three out of four enterprises reported that they had been visited, and two-thirds regarded their relationship with the Food Control as good. During the four-year implementing period, the situation within the hospitality industry similarly improved.

The Aluminium Industry

In the early stages of aluminium production in Norway, the local communities were strongly affected by pollution from the plants. From the 1970s, however, the plants have been under strict supervision from the Government Pollution Control, enforcing a continuous pressure on the development of new technologies. In the 1980s, large volumes of cheap aluminium appeared on the international market from Eastern Europe and South America. The Norwegian producers responded by choosing a niche for high quality aluminium. As a consequence, the companies were forced to search for new quality management systems with a capacity to facilitate the necessary improvement in processes and products. This process coincided with the introduction of the new OHS-regime in the late 1980s (NOU 1987:10A; Gaupset, 2000).

Various programs aiming to improve the quality of processes and products emerged over time (Tinmannsvik, 1991). One of the main producers, the Elkem-group, adopted a program called CORE from their Canadian partner Alcoa in 1987. The program emphasized the management responsibility through statements like: "CORE is foremost an instrument developed from line managers, implemented with line managers and for line managers ... and it will always be so" (Lindøe, 1992). The underlying values in CORE were in conflict with the Working Environmental Law implemented in 1977. This law emphasized the importance of a broad participation in all efforts to improve quality and safety. The unions opposed the CORE-concept, and after tough negotiations the concept was redesigned and a new program was established.

At the Karmøy plant in the Hydro Aluminium Group, a similar conflict about the legitimate role of the unions occurred. The Hydro Group had contracted a DuPont company, who is well known for their effective programs for improving OHS and quality management (Wokutch & VanSandt, 2000). However, the DuPont programs were not adapted to the Norwegian laws and regulations regarding industrial relations and a participative role for the unions at the enterprise level. When the union at the Karmøy plant realized that they were "bypassed", the union opposed the whole concept and refused to participate. The management at the Karmøy plant accepted the unions' arguments and they developed their own program. It was labelled "We will be better" and had a focus on quality, productivity and service. The program was later followed by the "KF-Vision", which was based on the idea of creating visions with more

emphasis on OHS issues (Parker, 1990). A new program called “Goal-oriented Process-Understanding” (GPU) focusing on quality, OHS and the external environment was implemented in 1990. This program has later been redesigned and expanded. The programs are compared in Table 4. The almost regular change in development programs, partly reflected new challenges and new needs for management systems, and partly reflected the changing management fashions.

Table 4. Programs of improvements at the Karmøy plant.

	“We will be better”	“KF-Vision”	“GPU”
Time frame	1981–1984	1986–1989	1990–1995
Characteristics	Mobilizing all employees after a 3 months breakdown in production. Focus on human relations, quality in production, market orientation and OHS	Mobilizing all employees by using creative techniques in shaping a shared vision of the future fabric	An integrated program implemented on a group level focusing on quality of production, OHS and the external environment
Production requirement	Precise delivery and good service towards internal and external customers	Using creative techniques to improve production processes	Improvement in skills and competence based on market and customers need
OHS and environment requirements	Measurable goals to monitor tidiness, cleaning, accidents, sickness absence and pollution	Focus on working environment, a meaningful working situation and open communication	Follow up the general OHMS within the framework of IC-regulations

The history of these programs reflects a n o ngoing c ontroversy about legitimate positions, decision authority about design of the process and the rules regarding quality and OHS issues. Due to the strong and knowledgeable position of the unions, the plant management could not ignore their contribution to the improvement of quality and working environment. The case study documented that the Organized Safety Service and the Safety delegates (positions settled in the Working Environment Act from 1977 played a substantial role when developing the new organizational tools (Lindøe, 1992).

Analysis

Despite great differences between the two industrial sectors, the merging of quality and OHS management systems apparently took place in both sectors. However, behind the harmony on the surface, some important differences exist. In Table 5 the most important factors influencing the merging process are compared for the two industries. They may be divided into external, structural and internal factors.

Table 5. External, internal and structural factors influencing the merging of quality and OHS management systems.

Factors	Hospitality industry	Aluminium industry
<i>External factors:</i>		
Markets and products	Non-standardized products and service	Standardized products for international market with demanding customers
Regulatory authorities	The Food Control represented the quality issues (QMS), and they served as a door-opener and pulling force for OHSM	The industry used as a pilot case for the principles of self-regulation due to transparency and well-established counterparts within the industries
<i>Structural factors:</i>		
Scale and resources	2250 enterprises from very small to the bigger hotel groups	Seven big plants with 1500 to 1700 employees
Product technology	“Simple” and labour intensive with strong customer relations	Mature and highly developed production technology
<i>Internal factors:</i>		
Implementing policy at the industry level	A new national association choose OHSM as one of the strategic areas regarding public opinion and members	Main companies demonstrate a high profile on OHS and environmental issues
Industrial relations	Weak unions, fragmented cooperation and distrust between unions and management	Strong unions and long traditions for cooperation between unions and management

External factors: Markets and products

One of the strongest merging mechanisms are market driven incentives, especially when they coincide with regulations imposed by authorities (Zwetsloot, 2000). Owners and management are always willing to listen to the market and take into account demands from the market – whoever this market is. A phrase is that the market in most cases wants quality. Consequently, quality is strongly connected to the market and thereby to management attention. If contractual agreements do not have a specific focus on OHS, there is a tendency to overrule OHS issues and only pay attention to quality issues (Dorman, 2000). Hence, there is a need for providing opportunities to link OHS to market-related issues on the enterprise and industry level.

Due to the design of the Extended OHS-program, implementing of Food Control had a substantial pull-effect in the implementing of OHS management within the industry as seen in Table 3 (Lindøe & Lie, 2002).

In the hospitality industry, most enterprises have limited resources; they have poor relations to the Labour Inspection and very limited experience with QMS. Hence, few external factors are pushing the industry in the direction of investing in upgrading their management systems. As the implementation speed was higher for the Food Control compared to OHS systems, one reason seems to be that Food Control is directly related to customers. Even the smallest enterprises know the risk they run if they do not meet the quality standards on food. It seems that market driven incentives played an important role in how fast quality systems were implemented, but hardly influenced on OHS-issues.

In the aluminium market, environmental issues gradually became more important. In order to improve its poor environmental image, the aluminium industry started to present the products as “green metal”. However, if the producers had to prove a “green” profile, the industry needed a documentation of how the operational systems actually took care of the environment and OHS issues. External actors came to play an important role in the definition of acceptable quality and OHS standards.

External factors: Regulatory authorities

The authority influence varies very much depending on the industrial structure. Due to the great number of small enterprises within the hospitality industry, and the relatively limited capacity of Labour Inspection, the influence from the authority has been weak. In addition, the heterogeneity of small enterprises has turned out to be a real obstacle to the implementation of systematic OHS management. The consequence is that there has been a huge gap between the authorities responsible for the implementation of the OHS-system and the small enterprises supposed to practise it. The result has been a slow implementation of OHS management in small enterprises. Authority, as Food Control Inspection, had an easier task due to precisely defined standards concerning “control issues” directly linked to the market reputation for each company. As long as the authority maintained close contacts with the enterprises, they played a decisive role in the development of quality systems and OHS management (Lindøe & Lie, 2002).

When the new regulation of Food Control was passed, the Food Control Authority gave priority to the hospitality industry. In the case of the Labour Inspection, priority was given to different industries based on local conditions. The enterprises reported frequent visits from Food Control and good cooperation between the authority and the enterprises, and at the same time a poor relationship with the Labour Inspection (op. cit.). The dramatic events regarding European farming (e.g. BSE) may have created an additional pulling-effect on the implementation of Food Control.

The most efficient merging of QMS and OHS management systems appeared in cases where authorities, management and unions had the same

interest and in cases where it was possible to lean on a constructive cooperation between the parties.

The structure in the aluminium industry is very transparent, with a few big plants and very well defined interests within each company. Hence, it is easy for regulatory authorities to identify partners and obstacles if some new regulations should be implemented. The industry accepted strong regulation on pollution and was positive to the new OHS-regulation in their attempts to meet new market demands. A merging process of unifying and harmonizing the elements in quality and OHS systems most easily took place where external demands on both quality and OHS-issues coincided, even though the demands came from different external actors (Lindøe & Hansen, 2000).

Compared to the hospitality industry with a big number of enterprises, it became easy for the Labour Inspection to have a dialogue with seven aluminium plants regarding implementation of the new regulation. Armed with legitimacy and credibility from top management who were eager to meet customer demands, OHS-staff and experts became efficient mentors for the implementation of the OHS management systems. The Pollution Control Authority took a tough position during the 1980s by introducing increasingly shrinking limits for pollution. The Labour Inspection, however, was uncertain how to implement the new “internal control”-regulation. They used the aluminium industry as a “test-case” for the implementation of the regulation due to the fairly transparent situation within the industry (NOU 1987: 10A).

Structural factors: Scale and resources

The difference in enterprise size between the two industries is striking. The aluminium industry represents the large units with a workforce between one and two thousand. The majority of enterprises in Hospitality operates at the opposite end of the scale. The issue of scale is of importance regarding the capacity of implementing new OHS management systems (Eakin, Lamm & Limborg, 2000). A comparative study of the Nordic countries found a systematic variation in the implementation according to company size (Lindøe *et al.*, 2001). Table 6 gives an indication of the status. In the four countries the process of implementing OHS management seemingly ran smoothly in the biggest companies (e.g. the aluminium industry) compared to the smaller ones (e.g. the hospitality industry).

It seems obvious that there is a mismatch between requirements to systematic OHS management and the capacity to implement it in small enterprises. Generally, small companies lack the capacity needed to secure a comprehensive OHS management. They rarely have the resources to develop the capacity or external partners to serve them (Flagstad, 1995; Walters, 2001). Often, unions are poorly organized (if existing at all) and without any capacity to push an implementation forward. In many cases,

Table 6. Status of systematic OHS management implementation in the Nordic Countries in 1997–1999). Percent of companies according to size (Source: Lindøe *et al.*, 2001).

	Number of employees					
	1–4	5–9	10–20	21–50	51–100	> 100
Norway	19	47	56	73	84	88
Finland	4	13	20	46	60	66
Denmark		22		51	57*	84**
Sweden	13		25			42,5

*No. of employees 50–199. **No. of employees more than 200.

they do not need a comprehensive OHS system, but rather a simplified system more appropriate to their operations.

As the hospitality case shows, some smaller enterprises seem to meet the OHS requirements fairly well. In other (exceptional) cases some customers (as in the petroleum and aluminium industries) have had a ripple effect on their sub-contractors and vendors. They force the smaller enterprises to implement the necessary quality control and OHS management procedures in order to get on the “bidders list” (NOU 1987:10A).

In most cases, the question of size is mainly a reflection of other factors discussed. Small companies have limited management resources often based on informal procedures that are difficult to document. They normally have a local market and few demanding customers. The authorities do not prioritize inspections in the smallest units and unions are normally weak or non-existent.

Structural factors: Product technology

In the service sector the products have some tangible elements such as food, beverage and a good night’s sleep. However, the intangible service became part of interrelated actions and communication between the service provider and the customer (Fitzsimmons & Fitzsimmons, 1994). This part of the outcome is less predictable and more difficult to control and handle with standardized methods. Consequently, it may be difficult to identify generic hazards and threats against OHS and the environment, although easy (cheap) to implement measures if hazards are identified.

The production technology in the aluminium industry is based on a continuous working process of metal. The principles and methods for control and improvement can be adapted to a process that is standardized and highly predictable. Hence, it may be relatively easy to identify hazards and threats against OHS and the environment, but not necessarily easy to implement actions. Even if technologies are very different in the two sectors, technologies do not seem to influence the process of implementation in decisive ways.

Internal factors: Implementing policy at the industry level

The shift from a re-active to a pro-active approach to OHS management that took place in the Nordic countries in the 1970s implied a sound and healthy workplace design, an active cooperation between employers and employees, improved safety-service and the use of Occupational Health Service. A common feature within this model was an Occupational Health and Safety organization encompassing three different collaborating structures; Safety Committees, independent and autonomous safety representatives and experts on OHS (Vogel, 1998). The aluminium industry utilized the full potential of this “three-pillared” system, and achieved a substantial improvement both in QMS and OHS management. The unions acted as watchdogs if the employers introduce programs undermining the legitimacy and formal position of the “three-pillared” system. Because quality is a main concern for management, and OHS is a main concern for the unions, the “three pillared” system seems to contribute to increased awareness in OHS and to juxtapose quality and OHS management in the merging process (Lindøe, 1992).

In the hospitality case the “Extended OHS-program” was launched as a top-down concept, and the implementation could be seen as instrumental from the management side. In the individual enterprises that were followed in the study it was obvious that the implementation of Food Control engaged the workers at the operational level. However, the interface between procedures regarding Food Control and OHS is limited and most probably the general involvement in OHS-issues is limited to those who were directly engaged in the program.

Internal factors: Industrial relations

The “Extended OHSM” program within the hospitality industry was a part of a top-down strategy in the new association to improve its reputation and adapt to the new regulations. The low degree of organized workers (28%) and a history of antagonism between unions and employers has been a weak foundation for a participative approach or cooperation as supposed by the Working environment law (Longva, 2001). There has never been a tradition for cooperation between employer and employees on enterprise development and building competence in the industry. That may be one reason for not involving the unions in the program. In the packets of seminars and materials that became part of the program, involvement of the workers and their participation was formally accepted, but hardly implemented. However, the improvement of the Food Control seems to be a key in motivating and involving part of the workforce (the cooks) in quality issues. The quality improvement methods was based on a bottom up approach and assumed a high degree of participation from the workers. In this case the smaller enterprises seem to have an advantage in the way they organized

the activities. The Food Control Authority became very supportive in this process (Lindøe & Lie, 2002).

The hospitality case underlined the need for “change agents” with relevant professional skills, knowledge and experience both in communication as well as in developing guidelines and checklists. Guidelines and checklists have to be very concrete. Combining general “Quality Management” knowledge and context specific competence from the industry seems to be essential. In the small enterprises there was a need for transferring the “systems-thinking” and bureaucratic terms into practical terms. The cases show that the “change agents” most probably would be union representatives, safety deputies, OHS-professionals, consultants and researchers who could utilize existing structures and processes in order to convey, amplify and help to reinforce OHS issues (Walters, 2001).

The dominant union in the aluminium industry organizes almost 90% of the workers, and they played a decisive role in daily operations. They have a long tradition as both watchdogs and co-players in development processes. The unions in the process industry have belonged to the most radical part of the left wing within the Norwegian Federation of Trade Unions, and their representatives have been educated both in organizational and technical matters, as well as legal issues (Grove & Heiret, 1992). Consequently, the unions acted as critical watchdogs to the new initiatives from management as illustrated by the case of implementing CORE and DuPoint. Through a tough, but cooperative behaviour, they have gained respect from management and thereby got opportunities to influence decisions on program design. By representing almost the whole work force they have a very strong position as a negotiating partner towards management at factory level. That created an atmosphere and cooperative culture for further involvement from the workers at all levels and they became constructive and proactive partners during the implementation of both QMS and OHS management systems. Within the framework laid in the Working Environment Act and the newly developed “internal control regime” (Gaupset, 2000) the workers council, safety delegates, as well as on the organized safety services were empowered (Lindøe, 1992). The aluminium case supports findings in other studies that the combination of a strong leadership and a strong union gives good OHS-results (Tinmannsvik, 1991; Walters and Frick, 2000).

The different approaches of involvement and participation of the work-force in the two cases can be summarized along the dimensions in Table 7.

The column at left indicates how the “Extended OHMS program” was presented and implemented as a top-down approach with a package developed by using external experts. In the first stage of the program neither unions nor safety delegates were engaged. However, the coincidence with the requirement from the new Food Control system gave a synergy towards the OHS. The case shows how a combination of external factors as market incentives and authorities can amplify both the implementation of each

Table 7. Steering, control and participation in the two industries.

	The hospitality industry	The aluminium industry
Description	Top-down implementation based strategic decision. Organizational tools as QMS and OHSM are developed and applied as instruments	Top-down and bottom-up implementation based on stakeholders legitimate position. Tools and methods developed in the hands of the stakeholders (leadership, workers and OHS-service)
Democratic values	The issue of basis for participation is not raised	Values are debated among the different stakeholders
Goals	Goals are given from above	Goals are set by stakeholders and they are negotiable
Legitimacy of actors	Participation depends of what is functioning	Participation is legitimate, legal and the critical role of workers was accepted
The learning process	The “program” as a package is developed by experts outside the enterprises	The programs were developed and redesigned inside the enterprises

system and a merging process. The right column shows the implementation in the aluminium industry as a participatory process based on democratic values and legitimacy of the workers as stakeholder. The process seems to be a combination of top-down and bottom up approaches where the unions and representatives from the Organized Safety Service play a substantial and active role (Lindøe, 1992).

Conclusions

In a historical perspective, OHS and quality issues have been quite different things, developed at different arenas, supported by different actors with different motives and ends. Quality issues have been a management concern, whereas OHS has been a core topic for unions and workers exposed to the consequences of poorly regulated work places. However, at the end of the last century a merging process of quality management systems and OHS management took place. That may have increased the status of OHS and institutionalized a proper handling of OHS issues in enterprises.

In some cases a merging of the two systems may take place despite the scale and resources of the enterprises and market incentives seem to give a “healthy recipe” even for small-scale enterprises (Lindøe & Lie, 2002). A comparative analysis of the industries measured along the three main dimensions, external, structural and internal factors, gives both coincidence and variance as summarized in Table 8.

The cases show that even if there seems to be a merging of QMS and

Table 8. Coincidence and variation of the implementation and merging of OHS and QMS systems.

Factors	Findings
<i>External factors:</i>	Market incentives are important driving forces. Regulatory authorities plays a complementary and supportive role, and could to some extent compensate for weak market incentives
<i>Structural factors:</i>	Scale and resources seems not to be decisive, although the capacity to document formal management systems vary according to size. Products and technology seems not to be decisive, although technologies provide some conditions administrative systems have to take into account
<i>Internal factors:</i>	Implementing policy at the industry level plays an important role. Strong industrial relations anchors the process among the work force and makes it sustainable. Weak industrial relations results in a “technical implementation and merger” which are not rooted among the workers or the OHS representatives

OHS-management on a “system level” it will in the long run appear as “technical” and “mechanistic” if the underlying process is not rooted in the industrial relation and the ownership among the stakeholders. The findings give a new dimension and a better understanding of the process of implementation and commitment among the employees. The “healthy recipe” pointed out by Lindøe & Lie (2002) needs some other ingredient in order to be sustainable and robust. This seems to be a well organized workforce, which acts as a constructive and critical stakeholder in adapting, applying and implementing quality and OHS-tools.

Seemingly, both the hospitality and the aluminum industry have successfully merged systems for quality and OHS. A problem may be that hospitality industries present in this study, could be leading companies and not average representatives for the industry. In the hospitality case, regulating authorities assisting in food control and thereby improving product quality also opened a pathway to implement OHS regulations. Due to an upcoming threat about punishment, the federation worked out plans and assisted the enterprises in the implementation. External experts supervised the process and the unions were more or less absent. On the contrary, unions played a decisive role in the merging taking place within the aluminum industry.

After data were collected in the hospitality industry (last data collection in 2000), the sector has been scandalized by several cases of poor quality provisions, illegal labor arrangements and even criminal activities such as the trade of smuggling spirits. External controls organized by Labor Inspection, Food Control, Fire inspection and tax authorities have revealed a rather poor status within many enterprises. It is not possible to get exact data about the problems faced in the sector. But existing evidence, even if

anecdotal, indicates that the implementation and merging of quality management systems and OHS systems still have a long way to go. Seemingly, many companies in the hospitality industry still struggle with the same problems that triggered the federation to act. The most important factor dividing the aluminum and hospitality industry is the involvement of workers and unions during the implementation process. As already discussed, an implementation based on outsiders and without worker participation, may result in a superficial and formal introduction of quality and OHS management systems. The establishment of sound and sustainable practices should also include management and workers cooperation.

Compared to the homogeneous aluminum industry the hospitality industry is very heterogenic including small- and medium-size enterprises and export-oriented industrial groups. This analysis may not give adequate attention to these differences within the industry. Compared to the implementation of OHS management from the Nordic survey (Table 6) and the enterprises covered in the hospitality survey the scale effect seems to be the same; the bigger the enterprises, the better the OHS-management is in place. However, if further explanations should be drawn regarding obstacles in the industry these issues should be focused on in future research.

The mechanisms leading to a merger of QMS and OHS management leads for a variety of practical implementations. Within a framework of “self-regulation”, the authorities have transferred more responsibility to the stakeholders in the enterprises (Hopkins & Hale, 2002). If collaborative mechanisms between employers and employees are in place, self-regulation most probably leads to a gradual merging of quality and OHS systems. This is especially true if “the market” demands a very high standard of products and processes. There is a challenge to combine contractual relations in the marketplace focusing on quality with “social contracts” between all stakeholders focusing on OHS. However, OHS management and QMS are not neutral technical instruments, but means of interest formed by actors with different motives and ends. In cases where investments in OHS give no immediate pay-off, stakeholders who want to encourage the development of productive workplaces, have to be active partners in forming appropriate merging mechanisms.

A merger of OHSM and QMS may have two unwanted implications from an OHS-perspective. The new functional orientation of OHS-regulations and the principles of “self-regulation” can model a general framework where the concrete substance will be procedures, activities and “best practice” set by other actors. The participative dimension could vanish, and OHS activities degenerate from a dynamic process to a bureaucratic management tool. Quality Management Systems (as TQM etc.) are international products and are not rooted in national laws and regulations. There is a risk that the specific positions and roles assigned to the organized safety service and safety representatives may be neglected and their legitimacy pulled down.

Another lesson learnt is that the role of the authorities should not be underestimated. A framework for regulating working life that has been developed for more than a hundred years is easy to neglect as old-fashioned cloths. However, the cloth marked “quality” is of little use if they only cover parts of the body.

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