

4. The leadership challenge of industrial sustainability: the case of Norway

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THE QUEST FOR A SUSTAINABLE VALUE CHAIN

Arguably, management education and leadership practice must be transformed to address sustainable values of today's working life. Delivering a sustainable value chain requires a new brand of leadership, thinking and practising with a dual vision for the future of the viable enterprise and the greening of the planet. It requires all actors to engage in and embrace sustainability aspects and values; leaders, employees, customers, suppliers, shareholders, and forerunners of the coming generation are legitimate stakeholders in the value chain.

There are over 16,000 business and management programs worldwide. Just some 700 business schools are now (2021) among the global signatories of the United Nations' Principles for Responsible Management Education (PRME) initiative. PRME aims to raise the profile of sustainability – including equipping students around the globe with a deeper understanding and better-developed skills to deliver 'change tomorrow' and 'be future generators of sustainable value for business and society'.

This is where more business schools can play a significant role. To achieve sustainability transformation in enterprises, leaders need a broad skill set. However, the schools will need a transdisciplinary blend of management, psychology, sociology, political science, engineering, and history topics to offer a leadership programme for sustainable industrial development. Thus, preparing the next generation of leaders and managers means that sustainability must be put at the apex of the future enterprise model, and that co-creation value processes involve all key stakeholders, internal and external, in the running of the enterprise.

Norway started on such a sustainability transformation of enterprises a generation ago. In 1992, the government launched a new regulatory regime to obtain a safer, healthier, and more environmentally friendly industrial production of goods and services. It encompassed both internal (leaders and employees) and external (customers, suppliers, consumers) stakeholders, and it focused on

the whole value chain (input–throughput–output). Besides, it challenged the traditional management education offered at business schools and the adjacent model of running a business with a sole focus on profit. Underpinned by the idea of sustainability, the Internal Control regulations of Health, Safety, and Environment (IC-HSE) regime implied a triple-bottom-line perspective, as well as catering for the needs of future generations (Karlsen, 2012).

NORWAY'S PATHWAY TO SUSTAINABLE PRODUCTION

Working conditions are regulated by both legislation and agreements. An agreement sets out normal pay and working conditions. The most important of these agreements is the collective pay agreement concluded between the national confederations of employees and employers. There are also agreements that apply to individual workplaces, concluded between the employer and the employees' representatives. Legislation regulating working conditions applies to all employees. In the Norwegian context, a central and vital regulatory vehicle is (from 1992) the IC-HSE regulations.

Internal control is defined as:

Systematic measures designed to ensure that the activities of the enterprise are planned, organised, performed, and maintained in conformity with requirements laid down in or pursuant to the health, environmental and safety legislation.

These regulations comprise practically all companies and employees in Norway. The objectives as stated in section 1, read:

Through requirements as to systematic implementation of measures, these regulations shall promote efforts to improve conditions in enterprises as regards to the:

- A. working environment and occupational safety,
- B. prevention of damage to health or disturbances to the environment from products or consumer services,
- C. protection of the external environment against pollution, and improved treatment of waste,
- D. prevention of incidents and accidents associated with their own lawful activity
- E. prevention of unwanted intended events so as to ensure that the objectives of the health, environmental and safety legislation are achieved.

As can be seen from the above, the objectives do not only apply to working conditions and working health aspects, however, but also include aspects of consumer safety and health, threats to the external environment, waste and refuse management, and security issues. The objectives require that all stages and processes of the production of services and goods are included in the HSE management operations, the input, the throughput, and the output. Besides, it

concerns the management of the human capital, the resources capital as well as the environmental capital. The objectives do, so to speak, *build sustainability into the value chain*, thus opening a pathway to a sustainable industrial future. Comments on the IC-HSE regulation, section 4, state that:

It is absolutely essential that internal control be integrated in the overall management and planning of the enterprise. More and more enterprises are now concerned to integrate their relationship to the external environment into their organisation strategy and profile, and internal control is an instrument suited to strengthening this work within the enterprise. Employees too will be interested in giving their enterprise an environmental profile and in contributing to a more environment-friendly community.

As such, the regulative goals demonstrate a model of a sustainable production system (Karlsen, 2010). The internal working environment aspects are entangled with a more comprehensive understanding of the workplace and the enterprise as a production system, having more effects than only impacting the welfare, health, and safety of its employees. Since the regulations also incorporate requirements about the external environment, it is an instrument which the employees and their elected representatives may use to influence dispositions by the enterprise affecting the environment. However, this effort boils down to the ability and capacity of the management to comply with all the objectives of the regulations, as stated above.

The introduction of such a legal requirement for internal control meant that management principles derived from mainstream organization theory became more widely spread and acknowledged within companies. At the same time, the IC-HSE regulations required the companies to adapt to new management principles and systems to comply with and document how compliance in practice would be achieved. Thus, the responsibility was clearly that of the individual company to conduct its own operations acceptably within current working environment, safety, and work health standards.

WHAT IS HSE, REALLY?

A Comprehensive Regulative Reform

The IC-HSE regulations shall ensure the authorities a superior and modern regulatory instrument through guiding and correcting both management, leadership, and management of HSE. Moreover, it shall provide support to a continuous quality improvement of production, accelerate the in-house reform process in enterprises and support participant democratic considerations through ensuring the right to participation and obligation for transparency. The IC-HSE regulations are therefore at the same time an administrative reform,

a program of learning activities, and an arena for democratic practices for the individual businesses and their employees and managers.

Today, the IC-HSE regulations in practice apply throughout Norwegian working life. Near 270,000 enterprises that engage employees are obliged to ensure and document their efforts to improve the quality of their HSE level. Regulations therefore affect close to all 2.7 million Norwegian workers. Since regulation is warranted for eight different laws, it is also simultaneously a reform program for the entire working life. The supervisory authorities in Norway are aware that they only have the resources to control a few of these companies. Therefore, the compulsory order for internal (autonomous, in-house) control of HSE is risk-focused and thus an important regulatory instrument. Requirements as to problem identification, risk analysis, and preventive measures are more comprehensive for enterprises with a high risk and a large workforce.

At the same time, the authorities have considerable knowledge about which industries and types of businesses are most exposed to considerable, inherent risks and to breaches of law and regulations. Five ministries and nine regulatory agencies administer the regulation and supervision of companies' HSE condition. Norway's national agencies have a varied arsenal of promotions and sanctions used to get businesses to follow legislative requirements. Businesses are also obliged to ensure and document their efforts to raise the quality of their HSE, so it never falls below the minimum level set out in the HSE legislation. HSE legislation not only pertains to a requirement to reach a minimum standard, but also to *continuously improve* companies' HSE level beyond this limit. Thus, HSE is a venue for sustained efforts in the workplace.

HSE in the Circular Economy

Arguably, the Internal Control regime incorporates HSE in a national circular economy system. As such, a circular economy aims to redefine growth, focusing on positive society-wide benefits from the production of goods and services. It entails gradually decoupling economic activity from the consumption of finite resources and designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital as intended in the IC-HSE regulations.

The change from a linear economy (take, make, dispose) to a circular economy (renew, remake, share) is expected to significantly support the attainment of the UN Sustainable Development Goals (SDGs), particularly SDG 12 on responsible consumption and production. As such, circular economy may be a subset of the sustainability concept. Sustainability aims at benefitting the environment, the economy, and the society at large. Circular economy focuses on environmental performance improvements rather than taking a holistic

view, as in the case of sustainability. Nevertheless, circular economy models and measures contribute significantly to the systematic improvement of the external environment as laid out in the IC-HSE regulation.

The circular economy concept synthesizes several schools of thought (Geissdoerfer et al., 2020). They include, amongst others, the functional service economy (or performance economy) of Stahel (1982, 2010); the Cradle-to-Cradle design philosophy of McDonough and Braungart (2002); biomimicry (literally: imitation of the living) as articulated by Benyus (2002); the industrial ecology of Graedel and Allenby (1995); and the blue economy systems approach described by Pauli (2010).

The Norwegian IC-HSE regime has, ever since its enactment in 1992, taken advantage of the various models and key concepts originating from the circular economy. Three core objectives laid out in section 1 of the national IC-HSE regulations link directly to the circular economy reasoning:

1. prevention of damage to health or disturbances to the environment from products or consumer services;
2. protection of the external environment against pollution;
3. improved treatment of waste.

These objectives are compulsory ‘marching orders’ to every Norwegian company. To the best of their capability, they shall implement a production mode complying to the objectives. Cleaner production is a way of thinking not only about the damage to health and environment and production, but also to the waste and pollution problems (Karlsen, 2010). Cleaner production is about efficiency. This has always been a societal goal, but not always in connection with the protection of the environment. The introduction of cleaner production means that systematic attention is paid to all phases in production processes and the product life cycle. Cleaner production includes conservation of energy and raw materials, reduction in the use of toxic substances, and product and process changes that reduce waste and pollutants that have been produced so far. The target is fewer, sometimes zero, emissions to air, soil, and water. All these actions are conducive to reduce the risks to humans and the environment because of industrial activity and consumption, as well as to do this in the most cost-effective way.

Unfortunately, cleaner production cannot always eliminate the production of all waste and all emissions, at least not with current knowledge and technology. So, to fully protect the environment, a complementary approach to prevention and control is needed, with a lasting goal of reducing risk. In this new hierarchy, the foremost option is cleaner production. The second option lies in finding methods for recycling waste and pollutants that are still found in the production system. The third option, if recycling is not achievable, is to choose

an adapted and environmentally sound treatment method that will destroy the threatening characteristics of the raw material itself. And the fourth possibility, which represents a kind of last resort, is to deposit what is left.

Waste management provides an opportunity for both internal and external reuse, and waste is thus a potential resource. Pollution, on the other hand, is a direct threat to the surrounding environment, including soil, air, and water. In this sense, there may be good reasons to treat waste and pollution as different focus areas and to use different methods and tools to gain control over the undesirable aspects of production this entails. Waste management is often part of environmental management approaches and the tools available there, such as the ISO 14000 series, or else as a procedure that requires its own special expertise and its own tools, such as technical environmental analysis.

The IC-HSE regulations are not very specific or comprehensive when it comes to treating waste as an HSE challenge. However, it is reasonable to assume that waste as a recyclable resource, waste minimization, and waste disposal are topics that fall within the target set by the regulations. As such, waste is a redundant resource which is not fully utilized in the production cycle, and the IC-HSE regulations aim to change this (Karlsen, 2011).

WHO (2018) claims there is potential for significant health benefits from a circular economy due to a reduction in environmental impacts. Reducing the use of primary resources, maintaining the highest value of materials and products through the recycling and reuse of products, components, and materials, and moving towards greater use of renewable energy and energy efficiency have many positive health implications. Direct and indirect benefits come from reducing the environmental impacts of manufacturing processes and thus making cost savings in companies, in households and in the health sector. In short, 'a circular economy offers an avenue to sustainable growth, good health and decent jobs while saving the environment and its natural resources'. This WHO statement complies fully with the ambition of the Norwegian IC-HSE regulations.

A Social Construct

The open question is, thus, what is HSE, really? How can we understand this acronym in scientific terminology? In summary, we can say that HSE and improvement initiatives relating to this can be seen as an organization recipe (Røvik, 1998, p. 13; 2007, pp. 230–234), as a learning arena (Lindøe, 1996), but also as a practice of participation (Høvden, 1989). Most of all, we can see it as a 'social construct', inextricably linked to work. Whenever we say 'work', we also say 'HSE'. Thus, HSE is a social reality that derives its meaning and its expression through the way we conceptualize it and fill content and meaning

into health, safety, and environment, i.e., how we make social categories and interpretations of these (Karlsen, 2010, pp. 40–45).

The HSE phenomenon is embedded in an organizational framework (an internal control system), an action arena (a systematic improvement endeavour), and a network of relational operators (social partners). This constitutes the social structures which ensure that patterns of action are repeated over time, and this determines how we perceive HSE as social patterns. Thus, HSE is constituted as an institutional power to influence and trigger action. Likewise, we tend to regard HSE as a social phenomenon that constitutes its own reality, it becomes a social fact which is external to and coercive to the actor (Durkheim, 1972, p. 30). At the same time, HSE does not only consist of our interpretation of patterns of action, but the patterns are constituted by social, observable facts in themselves. The regulations are, as such, a social fact, and similarly, the sanctions relating to this: the supervisory authorities' organizational apparatus is both palpable and real, and the same applies to the organizational capability the enterprises themselves build up to meet government demands for HSE improvement.

Arguably, we can see HSE in an ontological sense as a set of comprehensive social facts, established structures and processes that objectively exist as a social phenomenon. Likewise, we may assume that the HSE has an axiological pendant, i.e., HSE is a normative vision that constitutes a good, for the individual, for the organization, and for the community. This vision will help ensure that our ideas about 'the good work, the healthy workplace, and the sustainable production system' provide a rational justification. Concurrently with the enactment of the IC-HSE regulation, the government stated that; 'The good work is profitable for all' (ref. NOU, 1992, p. 20). HSE is also a term for a new form of (environmental) ethics (Jonas, 1974), i.e., it is a desired and expected practice (Karlsen, 2010, pp. 49–51) for a business.

Meanwhile we can deem HSE in an epistemological sense both as a declared symbol (in the requirements in the Working Environment Act for a 'fully satisfactory working environment') and as an interpreted symbol (i.e., 'HSE is the way we think and make improvements at our workplace'). Between these two epistemological positions there may exist a reflexive relationship. Enterprises are continuously brought into a situation where they must deal attentively to HSE phenomenon both as theory and practice. They must justify their HSE actions in the social context where they belong, thus the reflexivity creates the companies' various HSE discourses.

HSE DISCOURSES

A basic assumption of this chapter is that HSE is socially constructed. The theoretical justification for this assumption is related to discourse analysis

(Blommaert, 2005; Schmidt, 2010) and anchored in manifold documentation on HSE in Norway (Karlsen, 2018). Within organizational and management studies, discourse analysis has been used since the 1980s. Discourse is a certain way to speak and write about and understand the world, or a part thereof (Jørgensen & Phillips, 1999, p. 9). It represents a kind of narrowing of action and interpretation opportunities, so that we are left with some fixations of the social significance of the phenomenon. These fixations become so conventional that they are perceived as natural. HSE is thus based on such a narrowed and socially constructed understanding, but that does not mean that HSE is a reality that does not exist. On the contrary, HSE exists both as a social and organizational reality rooted in a physical (mainly technological) working world. HSE is the Siamese twin of work; whenever we perform work operations, HSE arises.

Our access to this multifaceted and embedded reality is always conveyed by discourses. All these realities contain no special significance; meaning arises only when we ascribe them such significance and connotation. However, we need the socially constructed term to gain insight into the physical phenomena. Social actions, such as to construct and assign content and meaning to the HSE concept, are relational. Just like the linguistic characters, they must relate to each other to make sense. Our commitment to HSE and our conceptual understanding can be interpreted in relation to others' efforts and understanding (Jørgensen & Phillips, 1999, p. 47).

Knowledge of HSE cannot be taken for an objective truth; reality is first available to us through our categories. We experience what we have notions about beforehand, but the content of concepts and interpretation may be developed in a long process. Arguably, HSE is therefore a reality that is constituted because of our way to categorize specific phenomena in production life. This way is in turn both culturally and historically encapsulated. HSE is carried by a genesis and a creation story, with different drivers and main tracks, it is culturally specific (for example to Norwegian working life) and it is predicated and grounded by our norms and customs in the workplace. In Norway, we associate HSE with the entire production chain (work, health, manufacturing processes, products, services, emissions, and waste) in a business, while in Sweden the same acronym only relates to working environment aspects. We hold different HSE images, but in theory, they could have been constructed identically in both countries. However, it is in this way that the relationship between knowledge of HSE and social processes in the workplace creates and maintains our perception, our HSE discourse. In such a framework some actions are deemed normal and likely, such as developing an in-house operational HSE system. Other actions become unthinkable and atypical, for example systematically evading all ordinances and community tasks related

to HSE improvement. This gives the social construction of our limited reality specific social consequences which in turn can be observed and analysed.

We must therefore centre on how knowledge about HSE is created, i.e., how truth or reality is expressed in the available HSE documentation. Critical discourse analysis asks about what can be said and written (normal, accepted, unchallenged) and how it is expressed in a special context, such as in the description of a company's HSE system. Our epistemological focus shares a social orientation inspired by Berger and Luckmann (1966), Derrida (1973, 1976, 1978), Foucault (1973), and Latour (1987). This means we should not just explain HSE as a social reality, but also discuss the processes that construct this reality. The construction process as practice is therefore at least as important as the linguistic phenomenon from which it is derived (Giddens, 1990).

In the assumed social construction of HSE, there are two basic principles of discourse analysis we can use here. Firstly, looking at the linguistic colouring function at societal level, that is when the HSE acronym is used widely at a level above the interpersonal. This is illustrated clearly in the Norwegian HSE legislation, as it constitutes a social reality through the scope and extent of the IC-HSE regulations and general use of the HSE concept. In the linguistic sense, HSE is thus rooted in all HSE laws (presently eight) and all HSE-related, specific regulations (currently about 150). Over time, the range of laws that relate to the HSE field has expanded and it is questioned whether a far greater number of laws and regulations also should have been included (Kringen, 1999). HSE laws support certain stakeholders' needs; they are not neutral. The language that this legislation applies for the benefit and enjoyment of some constitutes inconvenience and concern for others. The societal discourse is useful because it reveals lines of conflict, power, and influence conditions in the workplace.

Secondly, the actors apply a discursive practice to enact the linguistic HSE expression. When we look closer at the follow-up of the linguistic expression, we will probably find items that are interrelated and acting together. There may be certain words and expressions (HSE jargon), rhetoric (HSE reputation), systematization of knowledge (textbooks, manuals, checklists, etc.) that construct HSE as a distinct social phenomenon. If we use the terms 'HSE cheater' or 'HSE champion', then we intend to construct perceptions on various HSE profiles.

So, what are the most obvious HSE discourses? What immediately stands out as a holistic acronym? Our socially constructed, unipartite HSE concept can easily be split into various components. H = Health, S = Safety, and E = Environment. These three subcomponents represent important, yet in many ways different, core elements in HSE. The *health discourse* includes different perspectives on the most important aspects of the working environment and

occupational health and safety, including physical, organizational, and social and psychological work environment problems. These may in turn create pressure on welfare and health, resulting in absence, exclusion, and disability. The *environmental discourse* relates to the complicated system an enterprise uses for its application of resources, including energy, hazardous waste, air emissions, soil and water pollution, radiation, and so on. The *safety discourse* will typically comprise meso-events like accidents, sabotage, terrorist activities, fires, explosions, and so on.

As an overall concept, HSE will emerge as a discourse related to our understanding of sustainable development. At the societal level, it expresses a production life which through its value creation respects environmental limits; at the level of organization as a business which stewards and warden its resources; and at the individual level as a workplace that ensures a satisfactory working environment and a good welfare for its employees. A *sustainability discourse* may be perceived as the core of the HSE phenomenon; with a light rewrite of Hajer (1995, p. 28), this discourse says, 'HSE is a positive-sum game'.

In an enterprise, we may find many different HSE discourses, not just those mentioned here. Sometimes they will constitute understandings that can stand sharply against each other; they will reveal power relationships and conflicts of interest. In such a way they may play an active role, they form and manage the organizational behaviour and create meaning in the systematic HSE work. These discourses are not necessarily final versions of reality. Rather, HSE discourses should be linked to a theory of organization and management of HSE that would give discourses argumentative weight.

HSE participants will persistently reconstruct their understanding of the HSE concept content as of enterprises' improvement practices. Discourses are open to interpretation but will still create meaning and provide direction for action. Sometimes several actors share this opinion so that it becomes possible for HSE actors to pull in the same direction. The importance we attach to the HSE as a phenomenon and the associated safety management will still change all the time; sometimes rapidly and dramatically, sometimes only with small adjustments over time. The opinions will be open, they have no absolute origin or truth, as Dachler and Hosking (1995, p. 8) also point out. The various HSE discourses would still be in constant conversion and make sense in relation to each other, but new discourses may also arise. This discursive process will be important to observe and understand when analysing HSE as an arena of interest to management, workers, and external stakeholders.

HSE IS ZERO HARM AND SAFETY FIRST

Across industrialized countries, there is consensus on the assumption that the working life needs regulation to become safer, more conducive to protecting the employees, to promoting their health, and to safeguard their welfare. This is, so to speak, the rationale behind the Nordic working environment regulations since the 1970s. The purpose is to stimulate the emerging of a favourable in-house safety climate within the enterprises concerned, which in turn might impact on safety behaviour and safety culture.

Previously, We Were Concerned About the Safety Climate

Safety climate is seen as the shared perceptions of workers regarding safety in their working environment (Christian et al., 2009; Fang et al., 2006; Neal & Griffin, 2006; Zohar & Luria, 2005). Zohar (1980) argued that management commitment was a prerequisite of successful measures aimed at improving the safety climate in industrial organizations. This assertion has over time found considerable empirical support (Mearns & Yule, 2009). Perceived management commitment to occupational health and safety is considered to impact on the quality of safety climate. Employees are informed about the possible consequences of safe or unsafe behaviour by paying attention to overt safety-related statements and actions by managers and supervisors. Also, implicit messages from management about the relative status of safety compared to other organizational goals, including productivity, schedule, service, and quality, matter (Mearns & Yule, 2009).

Hofinan and Stetzer (1998) point out that if workers have perceived work pressure for quality performance, they will focus on completing the present work tasks and less on complying with safe working procedures. Thus, a management dilemma evolves. Safety is deemed a major organizational goal, not an obstacle or an aspect of production which may be overlooked, neglected, or assumed to be an obstacle to efficient production and viable business. Management is obliged to allocate resources on an equal footing to both production and protection. However, history reveals that there is a tendency for commercial organizations to drift into an *unbalance* in the split of resources between the two goals. There is a perceived competition and an incongruity between production and protection. Production usually wins, and protection is the loser ‘standing small’ by the end of the day. Organizations are – as running concerns – privileging production objectives. Arguably, such partial

or eschewed decision-making may lead to working accidents. Reason (1997, p. 4) points out that:

Since production creates the resources that make protection possible, its needs will generally have priority throughout most of an organization's lifetime. This is partly because those who manage the organization possess productive rather than protective skills, and partly because the information relating to production is direct, continuous, and readily understood.

Successful protection is often indicated and reported by the absence of negative outcomes, i.e., few or zero accidents and mishaps. Only temporarily, and most often after a serious accident or an alarming near-miss, will protection come to the forefront of the minds of those who manage an organization, says Reason (1997, p. 6). Both the management's daily actions and commitment to safety, and employee involvement and communication are conducive to a safety climate. The perceived value of acting safely rests on the assessment of the use of company's resources for production and protection purposes (Zohar, 1980, p. 98): is the use balanced or imbalanced? Perceived management practices represent a major determinant of safety climate in empirical research; thus, safety climate can provide insight into *safety performance* before accidents happen (Yule et al., 2007).

Then, Something Happened: Safety Culture Appeared

Guldenmund (2000) defined *safety culture* as those aspects of the organizational culture which will impact on attitudes and behaviour related to increasing or decreasing risk. Generally, safety culture is a set of prevailing indicators, beliefs, and values in relation to safety that an organization possesses (Fang & Wu, 2013; Antonsen, 2009). According to Reason (1997, pp. 191–220), safety culture contains five capacity components: informational, reporting, learning, justness and fairness, and flexible and supple capacity.

In an *informed* culture the organization collects and analyses relevant data, and actively disseminates safety information. An informed culture is the central issue in the 'Man-made disasters' theory (Turner & Pidgeon, 1997). A *reporting* culture means cultivating an atmosphere where people have confidence to report safety concerns without fear of blame. Employees must know that confidentiality will be maintained and that the information they submit will be acted upon, otherwise they will decide that there is no benefit in their reporting. A *learning* culture means that an organization can learn from its mistakes and make changes. It will also ensure that people understand the HSE processes at a personal level. In a *just and fair* culture errors and unsafe acts will not be punished if the error was unintentional. However, those who

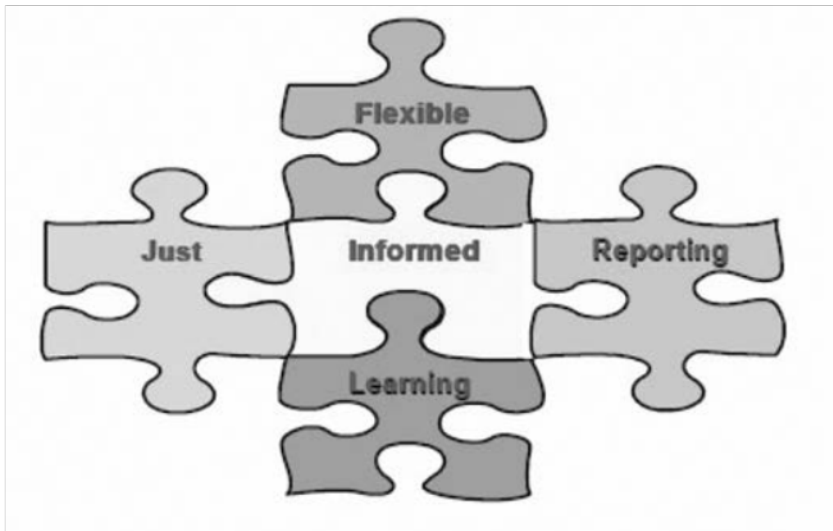


Figure 4.1 Safety culture on the front stage

act recklessly or take deliberate and unjustifiable risks will still be subject to disciplinary action. A *flexible* culture is one where the organization and the people in it can adapt effectively to changing and prompt demands.

Reason (1997, p. 196) sums it up neatly (as depicted in Figure 4.1) by stating that a safe culture is an informed culture; and this, in turn, depends upon creating an effective reporting culture that is underpinned by a just culture, in which the line between acceptable and unacceptable behaviour is clearly drawn and understood. Adequate reporting also contributes to organizational learning as it widens and updates the knowledge base.

Turner and Pidgeon (1997) argue that a good safety culture might both reflect and be promoted by at least four facets:

- senior management are committed to safety;
- shared care and concern for hazards and their impact upon people;
- realistic and flexible norms and rules about hazards;
- continual reflection upon practice through monitoring, analysis, and feedback systems.

At the same time, they emphasize the role of *organizational learning* to help to initiate better risk perception among individuals, and by this organizational change overcome poor beliefs, norms, and information flow (Turner & Pidgeon, 1997, pp. 191–195). They emphasize the need for *double-loop learning*. It is not enough to change behaviour in response to feedback. We

also need to improve the procedures for gathering and assessing signals about hazards, and to challenge our theories in use for interpreting the world.

Presently, We Observe a Comprehensive HSE Behaviour

Safety behaviour is made up by compliance with rules and procedures, together with participation in job-related operations. Paradoxically, non-compliance can be safer than compliance. Routines and procedures may be outdated, and work behaviour is characterized by ‘silent deviations’ and collective breaching of procedures. In contrast to the conceptualization and measurement of safety climate, which focus on workers’ perceptions of organizational safety policies and management safety practices, safety behaviour focuses on specific actions or behaviours exhibited by workers (Burke et al., 2002).

Typically, organizations view safety behaviours as employee compliance with behavioural safety routines. These behaviours comprise safety activities that are part of the formal work role and procedures, such as using personal protective equipment correctly, properly performing lock-out and tag-out procedures, applying appropriate work practices to reduce exposure to potential hazards and injury, and following safety policies and procedures (Fugas et al., 2012). Some researchers (e.g., Griffin & Neal, 2000) have questioned the adequacy of a one-dimensional model of safety performance that focuses strictly on workers’ behaviours performed considering safety rules, regulations, standards, and specified criteria within a safety system. Their argument is that safety performance is more comprehensive and would be better represented by an expanded model that also includes workers’ safety initiatives, such as making safety-related recommendations about work activities, taking an active position about accident reporting, and so on (Fugas et al., 2012).

Thus, following contemporary theoretical trends (Neal & Griffin, 2006), focus is presently on both proactive (safety participation) and compliant safety behaviours which, contrary to violations (Reason, 1990, 1997), are considered positive behaviours. This is also an approach taken in this chapter. Safety participation has a more voluntary and discretionary nature, including practices oriented toward safety that extend beyond normal role requirements. Achieving compliance with safety rules and procedures is important for good safety performance, but organizations also need individuals who proactively participate in safety (Neal & Griffin, 2006). Bakker et al. (2007) and Bakker and Demerouti (2007) clarify how performing the job beyond the minimum role behaviour requirements provides job commitment and thus job satisfaction. One question then is whether employees’ extra effort to take care of HSE can give them job satisfaction. The next question is how to facilitate it in daily work routines.

Griffin and Neal (2000, p. 349) define the two components of safety behaviour as:

- *safety compliance* – the core safety activities that need to be carried out by individuals to maintain workplace safety;
- *safety participation* – activities that may not directly contribute to workplace safety, but do help to develop an environment that promotes safety.

It has been suggested that safety compliance refers to behaviours that are required, and safety participation refers to behaviours that are voluntary in nature (Griffin & Neal, 2000, p. 349). In theory, management practices (as perceived by employees) impact on both safety climate and safety behaviour, thus constituting vital pillars of a high-quality safety culture. This is a common and current platform for both managers and workers in their search for improved occupational health and safety. The crucial question is whether this theoretical assumption is ‘watertight’ and to what extent it colours the IC-HSE management practice.

THE HSE LEADERSHIP PUZZLES

The Norwegian IC-HSE regime balances on two basic, but different leadership philosophies. One is related to the employer’s responsibility to achieve the minimum HSE requirements set by the legislation. This is usually done through the managerial prerogative and takes place through direct orders from the leaders. The efforts and results achieved here must be documented. The other is that the IC regime encourages continuous HSE improvement, which reinforces the structural requirements set by legislation.

Within both leadership paradigms, we find a series of variants (MOSIMTEC, 2020). Let us have a brief look at the current models of change management applicable to the IC-HSE regulatory regime.

Continual Improvement

The continual improvement model reflects the idea that enterprises should undertake incremental improvements to services, products, and processes. As an inherent aspect of the IC-HSE regulations, the model implies several core ideas, reflected in various parts of the IC-HSE regulations document. Such ideas highlight that HSE improvements are based on small, continual changes, employees’ ideas are valued, incremental improvements are typically low-cost, employees take ownership and are involved in improvement processes, and that HSE improvement is reflective, measurable, and potentially recurrent.

The granddaddy of continual improvement models is the Deming cycle: Plan>Do>Check>Act (Figure 4.2). The model is still a popular approach for achieving continual improvement (Delgado et al., 2013). It is a never-ending cycle that aims to help the enterprise improve further based on achieved HSE results. This model is depicted in the Guideline section of the IC-HSE document and recommends how the enterprise (and its leader) should get started, identify problems, and obtain overviews; plan and rank measures; draw up an action plan; and follow up the improvements.

In the 'Plan' phase, objectives and processes necessary to deliver results in accordance with the expected HSE goals are established. The 'Do' stage executes what is laid down during the planning step of the process. After

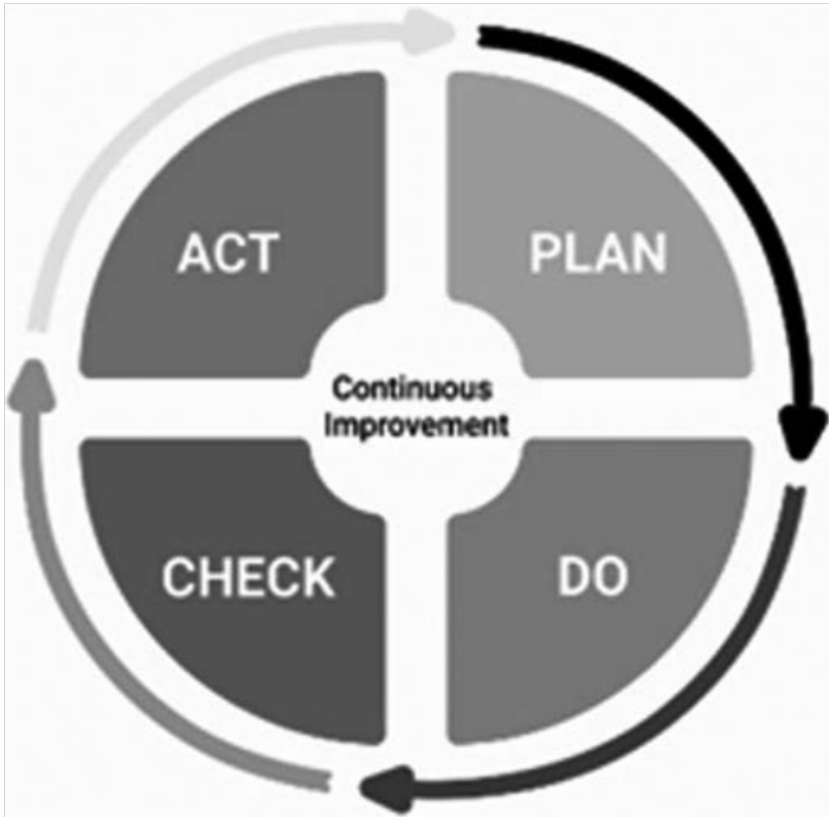


Figure 4.2 *Reinventing the Deming Wheel*

completing the objectives, 'Check' what is achieved and compare it to the HSE results expected. Finally, at the 'Act', stage, the enterprise should have collected enough data to make an educated HSE decision. Both qualitative and quantitative feedback should be collected to create a balance of feedback.

Besides the systematic improvement of the IC-HSE system, the enterprise should build a supportive HSE culture. Such an HSE culture serves both as a safety net against non-compliance with the HSE standard and as an awareness of the mandatory HSE requirements. An HSE culture cannot be ordered or structurally formalized. It is by its nature informal; it is both relational and collective, and it must be co-created by all actors in the organization. However, the company leader or her HSE manager may *stimulate* and *encourage* the making of an HSE culture conducive to reaching the 'zero harm' objective. Making continual improvement part of company HSE system and culture is a first-rate and cost-effective approach to tackling an organization's most difficult HSE challenges and to sustain HSE improvement over time. All enterprises are obliged to have a system for HSE activities, and all enterprises do have an informal HSE culture. However, the recipe to build a sustainable HSE culture is still pending, as opposed to constructing and operating an IC-HSE system that complies with the minimum requirements set out in the IC-HSE regulations.

Obligation to Maintain Internal Control

In Norway, the obligation to introduce and operate internal control rests with 'the person responsible' for the enterprise (c.f. IC-HSE regulations, section 4). By this is meant the management or owner of the enterprise. Who, or which functions, may be entailed, varies according to the enterprise's organizational set-up. Although internal control must be performed at all levels of the enterprise, the main responsibility for initiating the system (i.e., for 'introducing' internal control) and for maintaining it (i.e. for 'performing' it) is vested in *top management* of the enterprise.

To sum up: in Norway the IC-HSE regulations oblige the management to continuously perform a systematic improvement of occupational health and safety. This is partly to improve on the reform effect from the Working Environment Act, partly to increase environmentally friendly effects from production and partly to introduce a new arena for stimulating democratic workplace action. These systematic measures are to be implemented such that employees can participate in all stages of the improvement process. However, empirical findings indicate that not every enterprise has implemented an IC system at operative levels (Andersen et al., 2009). Besides, it is not well documented that the IC-HSE regulation by itself has a main bearing on the improvement of the working environment.

Tentatively, we may indicate that the present HSE regime and the management practices complying with the regulatory framework do not produce results that demonstrate a long-term improvement of HSE quality. The psycho-social and organizational working environment impacts are in fact not reduced, neither are the more traditional fatal and serious working accidents, Karlsen et al. (2019) report. Such findings indicate that management and leadership education in the field of HSE needs upgrading and reinforcement.

Co-creation Leadership of HSE Quality

Internal co-creation is at the heart of the IC-HSE regulations since the top leader is obliged to introduce and implement HSE improvement in collaboration with the employees and their representatives. Moreover, the employees shall participate in the introduction and performance of internal control.

In general, co-creation is about involving all stakeholders in the design of new services, products, business models, processes, and organizations (Gouillart, 2014). Although they may be affected via the market, the IC-HSE regulations do not apply directly to private individuals or consumers as stakeholders. On the other hand, internal co-creation comes into effect as a democratic approach in which employees design and secure the future of their organization together with management. Co-creation leadership involves the employees affected by the change.

The provisions make clear that the person responsible shall ensure that internal control is introduced and operated in collaboration with the working environment committee, safety delegate(s) and/or employee representatives (trade unions), where such arrangements exist. The regulation also expressly states that employee participation is obligatory. This is also a general condition of any employment contracts. Hence participation in internal control activities is a requirement embedded in the performance of the work itself.

Also, the Working Environment Act expressly requires safety delegates and members of working environment committees to participate in establishing and maintaining internal control. Moreover, the same Act entitles employees and their union representatives to be consulted in connection with management and planning systems, such as internal control systems.

Employees are also entitled to cooperate on aspects concerning the external environment. Comments to section 4 of the IC-HSE regulations state:

Internal control must also incorporate requirements regarding the external environment and is therefore an instrument which the employees and their elected representatives can use to influence dispositions by the enterprise affecting the environment.

Improving the HSE quality, i.e., both the internal working environment and the external environment, calls upon the use of hands-on experience among the workforces.

Moreover, it is clearly essential to turn employees' experience to account to ensure that internal controls function properly. Their familiarity with, for example, various inputs in production, procurement, waste treatment etc., represents valuable knowledge which can contribute to a systematic review of all aspects of the enterprise that affect the external environment.

Arguably, the IC-HSE regime is open to conflicting views and priorities on the allocation and use of resources, such as expertise, time, money, attention, and so on. However, the IC-HSE regulations state the expectation that:

The scope for conflicts of interest would appear to be limited inasmuch as consideration for the working environment and the external environment generally pull in the same direction.

Internal co-creation leadership of HSE is a core prerequisite to fulfil the ambitions and objectives of the IC-HSE regulations. Such a leadership style must encompass the ability to recognize both company managers and employees (including their representatives) as contributors who on an equal footing, and when needed involving external stakeholders, co-produce HSE quality conducive to an appropriate sustainable standard.

HSE as Responsible Leadership

The manager (i.e., the person responsible for the enterprise) shall take the initiative, providing motivation and laying the basis for the introduction and follow-up of HSE activities. The IC-HSE regulation calls for *responsible leadership* (Maak et al., 2016; Voegtlin, 2016). In the Norwegian context, this means that the management of the enterprise interacts with the society in such a manner that the concerns and interests of the various stakeholders are considered when contributing to the multiple bottom lines of economic, social, and environmental performance (Karlsen, 2011). The IC-HSE regulation requires that a responsible leadership strives to achieve sustainable business decisions that cater for shareholders, employees, clients, suppliers, the community, the environment, and future generations. This is stated to be a collective effort, with the management and the employees of the enterprise as key change actors.

Core aspects of the IC-HSE system must be documented and will be open to audit from the authorities as well as from other stakeholders. Arguably, these documentation duties of internal control will vary according to the nature, activities, inherent risks, and size of the enterprise concerned. However,

none of the 270,000 Norwegian enterprises obliged to follow the regulations are exempt from the documentation requirements. The enterprise must have written and binding objectives and an overview of its organizational set-up, including allocation of responsibilities, duties, and authority regarding the work on HSE improvement in the same way as for other areas of its operations. Besides, the enterprise must identify and document dangers and problems and, against this background, assess risks; draw up appurtenant plans and measures to reduce such risks. It must implement routines to uncover, rectify, and prevent breaches of requirements and carry out systematic surveillance and reviews of the internal control system to ensure that it functions as intended.

The documentation of the content of the HSE activities amounts to a comprehensive and massive management and administrative endeavour. Duties, responsibilities, and lines of delegation must be clarified. This documentation is not an all-out effort, performed once a year. Continual and sustained improvement of the internal control actions is a prerequisite built into the provisions, as expressed by comments to section 5 of the Internal Control Regulations:

Where routines and procedures regarding health, the environment and safety already exist, the enterprise will be required to further develop such routines and procedures into a coherent system. This will include systematizing work routines, instructions and the like that already exist in writing in such a way that they can be incorporated in an internal control system.

Besides, all employees shall possess the knowledge, skills, and proficiency they need to perform their work operations in a proper HSE manner. The enterprise shall also ensure employee participation to utilize overall knowledge and experience. It is the responsibility of the management to secure such a level of HSE capability in the workforce. And since the provisions do not oblige the management to document that employee participation and HSE proficiency are obtained and sustained, this may be a challenge to most enterprises, small as well as larger ones. As such, it calls for responsible leadership, arguably rooted in both a repressive and a restitutive leadership platform.

The Bare Necessities: Hybrid HSE Leadership

Eight laws (as of 2021), encompassing legislation on pollution, working environment, electricity, fire and explosion prevention, product control, gene technology, radiation protection and security, and emergency preparedness measures, meet the scope and extent of IC-HSE regulations. Many of these Acts contain a strict directive on what the enterprise must comply with to meet

the statutes. Therefore, the manager must use her power to order the proper measures and to direct the workforce in certain HSE-related operations.

In enterprises with a small workforce and low inherent HSE risk pattern, this kind of HSE compliance will cause little effort or resistance. Activities at companies which entail higher HSE exposure and a larger workforce require more attention, and arguably more direct commands from the boss. The HSE legislation sets several requirements as to documentation designed to show that such relevant HSE threats have been dealt with. The manager must meet these requirements both to elude the factual risks and to obtain documentation for learning purposes.

Uhl-Bien and Arena (2018) define leadership for organizational adaptability as efforts that enable people and organizations to cope, adjust, adapt, and respond successfully to a shifting environment. The essence of leadership is to influence and facilitate individual and collective efforts to reach common goals (Yukl, 2012). Leadership is regarded as ‘the process of influencing others to understand and agree about what needs to be done and how to do it’ (Yukl, 2010, p. 26). However, leadership is not only the property of a formal individual leader, but it also relates to both formal leadership positions and a function or task (Jacobsen, 2018). The core is to make efficient HSE decisions (Vroom & Jago, 1978). A main feature of these decisions is whether the leader makes them alone (autocratically) or whether employees participate (democratically) in decisions.

Now, consider the two opposing leadership styles, directing and nudging. The traditional directing leadership model enforces change by applying a top-down, command-and-control approach and by referring to legislation, rules, and laws. In the case of IC-HSE, the leader may refer both to her rights and power as employer to direct the employee and to her obligation to comply with the rules sanctioned by the HSE legislation to enact the internal control measures. In addition, the leader may impose non-compliance penalties upon employees. The nudging leadership model (Thaler & Sunstein, 2008) is more indirect, based on enablement and facilitation, assisting the person to self-discover possible solutions to HSE challenges, leaving possibilities for free choices and to opt out when needed. In general, nudge theory seeks to minimize resistance and confrontation, which commonly arise from more forceful directing and autocratic methods of changing people’s behaviour.

Nudging works on the principle that small and incremental actions can have a substantial impact on the way people behave – and it creates ‘choice architectures’ for these actions that encourage (but don’t force) people to make better decisions. Choice architecture is the design of different ways in which choices can be presented to people. Thaler and Sunstein (2008) endorsed thoughtful design of choice architecture as a means to improve actors’ decision-making by minimizing biases and errors that arise as the result of bounded rationality.

In regard to job performance and HSE improvement, the architecture could relate to the number of alternatives presented to an employee to do the job in a safe and efficient way, the presence of defaults, the way attributes of work tasks and HSE actions are described, and the use of incentives. Behavioural scientists have grouped the elements of choice architecture in different ways (e.g., Thaler et al., 2013; Johnson et al., 2012), in terms of tools (e.g., giving feedback, structuring complex choices), elements that structure the choice set (e.g., number of alternatives, decision aids, defaults, and choice over time) and those that describe choice options (e.g., partitioning options and attributes, and designing attributes).

The HSE field allows for the use of both directing and nudging as leadership models. In some cases, the HSE legislation requires specific actions that imply direct and conscious determined efforts by the leader to comply with statutory health, safety, and environment standards. Such enforced change may be confrontational and liable to provoke resistance. In the case of continuous improvement, moving the HSE quality above the minimum standards laid down in the legislation, nudge approaches may be easier to imagine, less threatening and involves the employees more directly. Arguably, nudging is less confrontational, more cooperative, and agreeable. However, the least-developed leadership capacity pertains to the nudging options and the effort of the top leader to establish a salient nudge architecture for continual HSE improvements. Busy middle managers play an important role in the daily HSE work and their behaviour is of great importance for the routines in practice. Therefore, these would benefit greatly from a more clarified HSE choice architecture.

In such a hinterland, HSE improvement calls for a hybrid leadership model. Hybrid leadership is combinations of concentrated individual leadership which co-exist alongside patterns of distributed leadership and emergent leadership. It demonstrates the complexity of leadership roles, in which both hierarchical and heterarchical leadership styles are intertwined (Gronn, 2008, 2011). The concept includes the blend of instrumental and expressive traits, reactive and proactive traits of leaders (Bolden, 2011). In our context, the enterprise is an arena where the relationship between the hybrid leadership and capacity-building of employees tilts the balance of power, arguably in favour of a sustainable HSE avenue. Therefore, enterprises need to groom leaders with HSE skills and capabilities conducive to strengthen organizational and employees' performance to approach the sustainability ambition of the IC-HSE legislation.

IS THERE NO BEST HSE SOLUTION?

The Norwegian IC-HSE regime is possibly one of the most ambitious industrial reforms worldwide. It comprises the company as a ‘holistic’ entity: the whole value chain (input>throughput>output), the working environment and safety issues, occupational health, and waste and pollution. And it applies to almost every enterprise, small or large, producing goods or services, belonging to the private or the public sector. It is a comprehensive strategy to seek organizational robustness and ecological and industrial resilience. As illustrated in Figure 4.3, it calls for both statutory and voluntary action, i.e., applying both hard and soft legitimate measures to improve HSE, as well as direct and indirect organizational approaches to implement the systematic improvement activities. In principle, it allows every possible means and tactic within the current IC-HSE discourse and regulation to draw near the optimal ideal of a safe and sustainable working life.

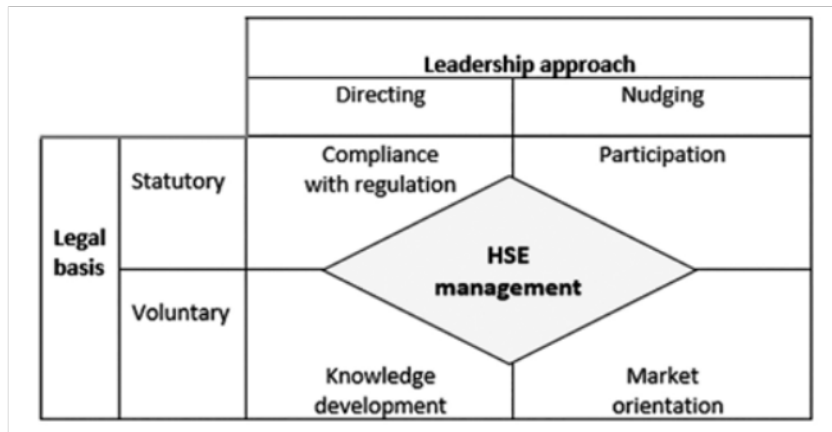


Figure 4.3 Frame of HSE leadership regulation

Despite this interactive and joint strategy of HSE management, the Norwegian regime has not yet brought outstanding results in the improvement of occupational health, environmental quality, and safety. Norway claims to have the best working environment worldwide; however, it still has amongst the highest rates of sick leave and is doing worse than Sweden when it comes to both fatal and serious work accidents (Karlsen, 2018; Karlsen et al., 2019). This is the paradoxical situation of the government-enforced self-regulation regime; in theory an ideal framework for HSE improvement, in practice mediocre results

far off the proclaimed zero-visions and continuous improvement assertions. The IC-HSE regime relies on well-known and acknowledged theory about safety culture, safety climate and safety behaviour relating to the workplace as an arena for joint management–employee action. Besides, theories, system models, and methods for continuous and systematic improvement of HSE also pertain and have been implemented in enterprises for the last two decades (Karlsen, 2011).

So, we are left with some open-ended questions: Do we have the wrong focus or wrong model in Norwegian work life? Is the IC-HSE a ‘cul-de-sac’ where we have come to the end of the journey of systematic safety improvement? Or should we focus on the reasons why most of our daily work operations in fact are going well, rather than on deviations, mishaps, and accidents? Should we shift focus from non-compliance, minimizing risks and the goal of getting away from risky states to the ability to respond, monitor, learn, and anticipate reasons for adjustments, to getting closer to a safe state? Is organizing for industrial resilience a more viable and sustainable model than organizing for safety (Hollnagel, 2014)? Alternatively, is the opposite locus more reasonable; should the IC-HSE regulation leave its ‘soft’ and supervisory position and move into a harder regime where enterprises are constricted by tougher regulation and stricter control? In short, does the conceptual opacity of our current understanding of workplace HSE in combination with the ‘discursive blindness’ fuelled by the contemporary organizational safety literature distract our attention away from the obvious fact that we are not improving HSE to a world-class standard? Or is the answer related to the ailing momentum of contemporary HSE-relevant leadership education and training, as performed by business schools and university management programs?

BUSINESS SCHOOLS PREPARING FOR A SUSTAINABLE FUTURE

HSE: A Collaborative Endeavour

Norway has experienced more than two decades of a novel HSE regulatory regime based on the idea of in-company self-regulation of HSE conditions. This government-supervised reform lends much leeway for collaboration between management, employees, and external stakeholders jointly to try out local HSE improvement measures. The Norwegian regime for internal control of HSE is an avenue for improving sustainability of modern industrial production of goods and services. It is rooted to the capability of the enterprise to improve HSE standards continuously.

Arguably, HSE is the most regulated and compulsory field of management responsibility in enterprises. The IC-HSE regime assumes learning at all

levels as a necessary requirement for achieving the HSE goals. In particular, the leaders must ensure that the employees have sufficient knowledge of and proficiency in systematic HSE, including information on changes made in the enterprise. This may be met by in-house training or by external education. Besides, the leaders themselves must learn what it takes to comply with HSE regulations, fulfil the requirements of its stakeholders, and safeguard the avenue to a sustainable future.

The worsening global sustainability crisis calls for the future business logic to embrace HSE and sustainability. If a business aspires to continue into the indefinite future, it can no longer be hesitant or half-hearted about sustainability: it must go 'All In', Grayson et al. (2018) argue. Managers need to be equipped with the mindset, behaviours, and skills for sustainability. Businesses will no longer be assessed on financial performance alone, but on their relationships with their employees, customers, regulators and their impact on today's and tomorrow's society. Rather than positioning corporate sustainability as opposed to markets, it means helping business to activate its entrepreneurial vitality to drive industrial sustainability.

Such ambitions run concurrently with the targets of the Norwegian IC-HSE regime. This regime is deemed the #1 national strategy as an avenue for sustainable industrial production in Norway. On the one hand, it complies with various UN SDGs, such as affordable clean energy (#7), promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all (#8), reducing inequality (#10), and ensuring sustainable production and consumption patterns (#12). On the other hand, it also meets the expectations of the UN goal (#17) of responsible, collaborative (global) partnership committing all relevant stakeholders, including future generations, to improve HSE quality.

The role of leaders and management is vital, both in meeting the obligations required to maintain the internal control, and as role models and behavioural forerunners of responsible and sustainability-focused actions. The IC-HSE regulations require the leader of the enterprise to acquire a minimum set of knowledge on how to perform responsible HSE leadership. This compulsory requirement can easily be upscaled and turned into a more comprehensive and sustainability-focused leadership education offered by any business school. Preferably, top leaders, middle managers and first-line supervisors may be included in the target group for such HSE leadership education. Arguably, business schools could supply the leadership education and training to support such as novel business logic.

The HSE Birthright of a Responsible Business School

Lorange, in *The Business School of the Future* (2019), questions the status and legitimacy of business schools, since many of the world's leading institutions are now experimenting with new business models. He argues that business schools must transform themselves and remain relevant to society to survive. Parker (2018) argues that business school education is framed in terms of winner-takes-all-managerialism, which is out of sync with contemporary trends of sustainability and corporate social responsibility. In his book, *Shut Down the Business School*, which takes a European perspective, he asks, 'what is wrong with the management education'? Despite opposing views on the rationale of business schools, both authors promote the need for business schools to broaden their horizons and revise leadership development education to reflect modern contexts and thus to prevail.

It goes almost without saying, the business of business schools is to teach business, but what should we now deem 'sustainable' businesses? One challenge for industry that is apparent is deciding which of the UN's 17 SDGs should apply to business, and in what circumstances. While individual companies might struggle with large overarching targets, they need to find which UN targets are most relevant to their business. Arguably, one target (e.g., climate action) is not enough and 17 is too many, especially as some goals overlap with each other, O'Higgins and Zsolnai (2018) argue. These authors illustrate that companies that have adopted progressive business models may be inspired by different SDGs. What these companies have in common is that they seek to serve society, nature, and future generations.

Presently, business schools have a window of opportunity to prepare students, the workforce and potential business leaders for a sustainable future. SDG #4, 'quality education', expects that by 2030 learners will acquire the knowledge and skills needed to promote sustainable development. Not only should business schools express a commitment to the SDGs, but they also must respond to a key theme in European Foundation for Management Development (EFMD) standards – Ethics, Responsibility, and Sustainability. This theme makes up one of the principal dimensions in the EFMD Quality Improvement System (EQUIS) framework (the leading international system of quality assessment, improvement, and accreditation of business schools) and it implies the integration of the sustainability theme into the business school's educational programs.

Arguably, a winning business school will have to place emphasis on value creation that speaks to both our economic and our social needs. Management education will become the driving force for positive change in business as well as in society. Since management and leadership matter to business performance and sustainability in various ways, this is where responsible business

schools – responding to the UN SDGs – should help amplifying their impact. As such, the IC-HSE regime offers a prospective opportunity set or choice architecture for industrial sustainability, and for teaching management students both about the theoretical underpinnings and the practical implications of modern, flexible, and future-oriented HSE leadership. And – both as theory and practice – it has transfer value to industry and business schools outside the Nordic countries.

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