This think piece raises issues of the effectiveness of OSH management systems (MS):

1. Voluntary MSs are different in nature from mandatory OSH management (OSHM).
2. MS/OSHM practices focus more on procedures and documents than control risks.
3. Workers’ representative participation is essential for effective MS and OSHM.
4. Growing irrelevance of employment-based MS and OSHM to control OSH risks.

Finally, how to improve MS and OSHM within OSH policies will be discussed.

1. MS have different origins, objectives and implementation than OSHM

OSH risks kill some 2.3 million workers per year (2.0 million occupational diseases) at a cost of some 4 per cent of the GDP. If the long term erosion of work ability is included, costs may be over 10 per cent (Takala et al., 2014).

To reduce this huge burden of poor OSH, the strategy has shifted from detailed requirements (‘what to do’) towards a proactive prevention (‘how to get it done’), through OSH management systems (MS) and systematic OSH management (OSHM; Dalrymple et al., 1998; Frick et al., 2000). Yet MS and OSHM are not clearly defined and are frequently used alternatively. Shifting between the concepts, Nielsen (2000) found that MS are not “well-defined, with no clear boundaries between OSH activities, OSH management, and OSHM systems.” A review of MS-interventions’ effects showed mixed results of a voluntary MS and of a regulated OSHM (Robson et al., 2007).

However, this interchangeable use confuses major differences in origin, aims and implementation of MS and OSHM (Frick and Wren, 2000; Frick, 2011). Nearly all MS (e.g. OSHAS 18001 and ISO 45001 and corporate MS such as by Du Pont) are highly complex privately produced and marketed standards aimed for a few large (often high risk) organisations. They are normally implemented through the commercial certification and monitoring of auditing firms (with the ILO guidelines, 2001, as an exception).

OSHM refers instead to public regulations on systematic OSH management (e.g. EU’s Framework Directive; 89/391/EEC; and California’s §3203, 1991; Walters et al., 2011) for all employers to implement. As 95 per cent are micro or small firms (MSEs), OSHM’s procedural requirements are far fewer than in MS and hardly constitute a separate ‘system’ in the (mini)organization (cf. the definition in ISO 45001). The employers’ compliance is normally promoted, monitored and enforced by the labour inspection. Private MS and regulated OSHM can overlap, e.g. in the Seveso Directive (from 1982, now Seveso III, 2012/18/EU) that mandates genuine OSHM-systems of high-hazard facilities. OSH authorities may also use MS-certifications in their promotion of OSHM (e.g. in Australia, Denmark and the US). But this does not change the different nature of private MS standards and publicly mandated OSHM (Frick, 2011).

2. Paper compliance is easier than integrated management control of work risks

Mandatory OSHM is defined by its results. “The employer shall take the measures necessary for the health and safety of workers” (89/391/EEC, article 6:1). Voluntary MS mostly requires compliance with all OSH regulations. Hence they too are goal-defined. If there are risks at work, there is not (full) compliance with OSHM/MS. To achieve, or at least approach, this zero-risk goal,
OSHM requires some and MS many systematic steps in how to manage OSH, such as risk assessments and action plans. However, it is easier to understand and introduce the prescribed procedures and documents of OSHM and MS than to integrate a quality control of OSH in the total management. The procedural means therefore easily become ends in employers' OSHM/MS-implementation, while serious risks may remain unresolved.

The compliance to MS requirements (with zero risk goal) is normally to be secured by MS auditing and certificates, mainly OSHAS 18001 and now ISO 45001. However, even in countries with strong OSH traditions and actors, many certificates have more paper than preventive value. In some cases, MS mainly unburden the risks on workers or aim to bust unions. In all, firms and sites with MS-certificates may well have good prevention but how much is the case is an empirical issue, mainly depending on why managers pay for MS (Frick, 2011; and mechanisms in Zoller, 2003).

OSHM is a duty for all employers to implement. Their compliance is mostly indicated by manager surveys, e.g. ESENER 2 in the EU (EU-OSHA, 2016). However, these surveys are neither valid nor reliable. They may ask for general compliance (‘have you implemented OSHM?’) or mostly for some procedures (notably risk assessments) but fail to link these to how risks are prevented, which is the legal compliance criterion. The reliability is also mostly poor through very low response rates (around 20 per cent in ESENER 2). With mainly extra-interested managers’ self-reports on only some formal requirements, the results grossly exaggerate the OSHM-compliance. ESENER 2 claimed that 70 per cent of EU’s establishments (from five employees) had written risk assessments. However, 70-80 per cent of these are MSEs and EU-OSHA’s own large SESAME-study demonstrated OSHM to be all from completely to severely lacking in these firms (Walters et al., 2018a). Robson et al. (2007) equally took Norwegian manager surveys at face-value and claimed that “there was an increase from 8% to 47% of workplaces fully implementing the IC” [OSHCM] “requirements over the period 1 year to 7 years post-intervention”. Yet Internal Control (of OSH) is also defined by its results. For 47% to fully comply means that the dominating MSEs have no risks at work, which is completely at odds with Norwegian OSH-surveys that demonstrate widespread risks in all industries.

A valid evaluation of OSHM-compliance has to use qualitative methods to trace the implementation process (the ‘programme theory’ of Pawson and Tilley, 1997). This was done in a meta-review for the Swedish Work Environment Authority (SWEA). It used a general model of performance management by Johanson (2013) to analyse the OSHM in some 220 case studies (Frick and Johanson, 2013). The results were anchored in quantitative data on e.g. inspection and injury statistics and from OSH risk and health surveys. The reliability of the results were further increased by their remarkable consistency. These found formal procedures in medium and large employers, where CEOs mostly had delegated OSHM away to line managers but with scant resources, monitoring and support. The limited compliance partly improved the prevention of technical risks but not much of organizational ones. The 95% MSEs had at best only started OSHM as their managers lacked competence and didn’t try to get it (Frick, 2014). Yet SWEA (2015) dismissed these results. Based on their inflated compliance assessments and poor survey data, it claimed that some 80 per cent of Swedish MSEs assess all risks, which again flies in the face of all research.

3. Worker’s representation is fundamental in effective MS and OSHM

The objective of work is efficient production. Even benevolent employers have other main goals than healthy work. Nor do they control every aspect of the production. Workers’ views are hence necessary to define risks and prioritize measures, to design and implement workable upstream remedies and to monitor and fight for effective OSHM and MS. Such a critical bottom-up perspective, through worker influence, is essential for good OSH results. It also a legal right in most countries and prescribed in MS-standards, though with different national rules and practices (Frick, 2011).
Walters and Nichols (2007) demonstrated that direct worker participation improved OSH results, workers’ safety representatives achieved more but union trained and backed safety reps were the most effective (Gallagher et al., 2001; Hall, 2016; Walters and Wadsworth, 2017). The some 95 per cent MSEs have severe OSHM problems and receive little support in this from labour inspectorates or OSH-services. The only OSH-actor to reach them is trade unions’ regional-territorial safety reps, who successfully promote better OSHM and OSH in MSEs in overwhelmingly good cooperation with owner-managers (Frick and Walters, 1998; Walters et al., 2018b).

4. MS and OSHM cover less and less of precarious work and its health risks

Mandatory OSHM is a duty within the employment relation. Voluntary MS are not restricted to this but are normally applied within organizations. Worker influence is also based on employment and a long term relation is crucial for effective union safety reps. Yet more and more work is done in other forms, such as self-employment – also in platform work – and hired labour (plus much non-declared work). Workers in supply chains, at franchisees, who are posted and other migrants, or on temporary or zero-hour contracts have employers, are bound to implement OSHM. Yet their employment relation is mostly weak and it is completely lacking to the outside corporations that in reality decide much of their working conditions.

There is some coverage by MS and OSHM for such precarious work. OSHM is often to cover all at multi-employer sites, such as in construction. This duty may extend to hired labour and they may be covered by the sites’ safety reps. There is an upstream preventive duty for producers and suppliers of materials and machinery and partly also for designers and planners (again, mainly within construction; James et al., 2007; Walters and Wadsworth, 2017; Walters et al., 2018b). As mentioned, regional-territorial safety reps support OSHM on MSEs in some countries. OSH authorities have also sometimes used inspections as strategic tool to make corporations at the top of supply chains improve OSHM at all sites they in practice control (AV, 2003). Yet, by and large, the direct line of command, top management commitment and worker influence, necessary for effective OSHM and MS is lacking in a large share of the present and future work. OSH risks and ill-health are worse in this precarious work in less managed production (Quinlan, 2011; Walters et al., 2018a).

5. Understand, apply and extend the quality control logic of OSHM and MS

a. More resources: Poor OSH directly costs some 4-5% of GDP, but with long time erosion of work ability it costs around 10 % (Takala et al., 2014). OSH authorities and other actors are severely under-resourced and under-staffed for this challenge.

b. Understand and apply quality the control strategy: OSHM-MS must focus on effectiveness and not only on means-procedures. To change this, engineers, lawyers and medics in authorities and other OSH actors, with little organizational competence, need training and added management expertise. The quality control logic of OSHM/MS must be applied throughout. Inspection injunctions and the like should not go to line managers but to the employer-CEO with the duty to organize OSHM-MS and to secure that it works. This includes going for the top in the frequent multi-site organizations and not inspect each site separately (AV, 2003; Walters et al., 2011; Bruhn & Frick 2011; Frick and Johanson, 2013).

c. Micro and small firms through strengthened intermediaries: MSEs are far too many for the labour inspection to improve their poor OSHM, even with more resources. Intermediate actors need also to be strengthened. The often mandatory OSH services need much better OSHM-competence but also stronger supervision not to sell inferior services to MSEs. The effective system of union appointed regional-territorial safety reps should be spread (Frick and Walters, 1998; Walters et al., 2018b).

d. Major actors in network production need OSHM-responsibility: The outsourcing of risks in network production (4 above) should have regulated preventive OSHM-duties for purchasers, suppliers and others in proportion to their influence on working conditions (James et al., 2007). Work deregulation to maximize flexibility must be balanced
against the resulting huge OSH costs and suffering (Quinlan 2011). Those with power in networks should be supervised for the OSHM of all participants (cf. AV, 2003). Unions' safety reps (including regional-territorial) need increased rights and access to also contribute to better OSHM, and hence OSH, in network production.

e. **Supervise and sanction MS-auditors to make their certificates credible:** Accrediting bodies need more, and often more competent, staff for a stricter supervision and sanctioning of the auditing and certifying firms to make it unprofitable for them to sell non-valid MS-certificates. Increased supervision is required also of other voluntary OSH certificates within network production, as a focus on procedures instead of on effective prevention is easier and economically tempting.

**References**


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