
IV.2 Using management systems in public environmental supervision

Martin de Bree

Academic Researcher, Rotterdam School of Management, Erasmus University, the Netherlands

Han de Haas

Policy Advisor, Environmental Law Enforcement, Province of Noord-Brabant, the Netherlands

Abstract

Effective regulation of big companies seems to be a growing concern of public administrators. Processes are complex and risks often hard to analyse. Public supervisors therefore look for more effective methods of regulation for large facilities that are also efficient. Self-regulation through company compliance assurance programs is one option that has been considered. Even though self-regulation has advantages in certain circumstances, there are also pitfalls that can result in serious societal damage. Some forms of self-regulation such as codes of conduct have not proven to be consistently reliable in assuring risk reduction. In contrast, management systems utilized by regulated companies may offer a more suitable focal point for public supervisors. A compliance management system (CMS) is the part of the private management system aimed at assuring regulatory compliance. By focusing public supervision on the CMS, the government supervisor can differentiate companies with effective and ineffective compliance assurance and stimulate improved compliance assurance by giving feedback on a system level.

Keywords

System, supervision, compliance, management, compliance management system, self-regulation, environment

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IV.2.1 Introduction

There is an ongoing debate about how big private companies should be regulated. On one hand, public supervisors can employ a traditional approach that relies on

monitoring whether or not a given company complies with legal requirements. This traditional approach is reactive by nature and can require a large inspection and enforcement staff that may be impractical to fully fund. Further, given the complexity of large facilities, this approach may require a level of expertise to which agencies may not have access. Companies may, on the other hand, claim that they are capable of self-regulation using credentials like industry codes or their own compliance policies, although on several occasions experiences with self-regulation have been disappointing. This does not necessarily mean that self-regulation lacks potential as a possible approach. In this chapter, we take a closer look at the opportunities for public supervisors to make use of corporate management systems as an effective and efficient tool for environmental regulatory oversight.

IV.2.2 Problems and dilemmas with traditional public supervision

The three main functions of public supervision are to collect information about a case or a process, to determine whether or not there is conformity with the legal requirements and—in the case that the actions do not conform with legal requirements—intervene to restore conformity. What we mean in this chapter by *traditional supervision* is that public supervisors act strictly according to these three main functionalities. In the practical world, traditional public supervision is not likely to occur in its purest form, because most professional supervisors look at more than the strictly regulated issues, for example they take into account the professional skills of operators or the level of transparency a company is willing to demonstrate, although these aspects may not be regulated.

IV.2.2.1 Limitations of traditional public supervision

First, traditional supervision is largely reactive in nature. It does not very well recognize risks that have not (yet) materialized into incidents. If an incident happens, the supervisor is overtaken by the events and it is often too late to prevent damage to public values like the environment. Traditional supervision may not be aimed at understanding the processes or mechanisms leading to incidents and noncompliance, and thus does not provide predictive value. Even popular strategies like responsive regulation are based on supervisory action as a reaction to offences.

Traditional supervision typically is not primarily focused on prevention of offences. Its main rationale is that a violation should be stopped and steps taken to prevent recurrent violations. The underlying assumption is that the regulated company will somehow learn from penalties and improve its performance. However, without communicating about the cause and effect of violations, one could doubt whether this is very likely to happen.

Second, traditional public supervision is limited by observation capacity. It only observes a limited part of the total regulated case or process during a very limited amount of time. In spite of the attempts of supervisors to select only the most risk-relevant objects for observation, they have at best only a snapshot of a part of the company. The bottom line is that the intensity of traditional physical inspections is limited.¹ It is not unlikely that in the practical world the only substantial relevant operating

¹ In the Netherlands the on-site environmental inspection time for big chemical plants is

mechanism of traditional public supervision is the threat of an inspection visit and its consequences.

Third, it might be that traditional supervision is too much based on penalties as unilateral correction instruments. Penalties may not be productive in every case. Although disciplinary actions imposed by a public supervisor may work preventively by deterring future violations, sometimes sanctions can have counterproductive effects, especially when applied to subjects who are willing to comply. They most often need help rather than punishment. Treatment that is perceived as unfair may easily impair the confidence and trust with the inspection organization and undermine cooperative intentions of the company. Research shows that companies that are aware of the violation and intend to do the right thing require customized treatment.² The effect of a sanction also partly depends on the way it is communicated. The manner in which the enforcement instruments are deployed and communicated largely determines the effectiveness of deterrence.³ Both the United Kingdom⁴ and the Netherlands have formulated criteria to achieve a balance of sanctions.

The severity of the violation in terms of (potential) damage is not always taken into account, and therefore penalized companies may perceive penalties for what they see as minor noncompliance as disproportionate and unfair. This perception is unfavorable for the motivation of the company to really solve the problem and its root causes.

In addition, public regulations do not always adequately cover the risks for environmental damage for every specific situation. In certain specific situations, regulations may be perceived as too detailed and not relevant in terms of risks for the environment. Thus, not every formal violation is perceived as equally serious.

Summarizing these points, we argue that although traditional public supervision can promote compliance, it has several shortcomings. It is reactive in nature, falls short in preventing incidents, and has limited potential in promoting compliance assurance.

IV.2.2.2 Challenges

Expectations about public supervision are very high. Regulated community members see inspections in the absence of incidents as disruptive. On the other side, supervision has failed in the eyes of society and politicians when there are incidents. This results in the simultaneous calls for more and less public supervision.⁵ Further, incidents are quite often followed by additional legislation, commonly referred to as the incident-rule reflex. More legislation typically leads to higher pressure on supervisors to monitor compliance. The result is that supervisors seem to face a mission impossible: on one hand they are expected to prevent any incident, on the other hand they are expected to minimize the inspection burden of regulated companies.

typically 50 to 80 hours, which is the equivalent of 1% or less of the plant's total operating time during a typical year.

² Mulder and others (2014).

³ Treviño and others (2014); van Wingerde (2012).

⁴ Presentation IMPEL Malta workshop, 1 October 2013, Ann Brosnan, Chief Prosecutor, Legal Department, Environment Agency, UK.

⁵ This notion was articulated by the Dutch Scientific Board of Governmental Policy, *Toezen op Publieke Belangen* (2013).

Another challenge supervisors face is how to cope with what might be referred to as corporate ‘window dressing’, especially in the light of limited inspection capacity. In many industries, regulated companies are adopting regulatory compliance and ethical behavior codes ‘on paper’. However, it has long been recognized that formal policies do not necessarily reflect the actual reality. When formally adopted policies are not actually implemented, scholars use the term decoupling to indicate the gap between paper procedures and real-world compliance.⁶ Decoupling may be caused by either deliberate or unintentional actions.

The problem of inconsistencies between what is on paper and physical reality does not only occur with the adoption of governance and ethical codes. It is also a recognized problem with regard to private certification of environmental management systems.⁷ One might argue that the public supervisor could rely on the assessment of the management system by private certification auditors and accept the auditors’ conclusions about its effectiveness. In spite of several advantages of certification, like a positive correlation between an environmental management system and processes related to environmental performance,⁸ several scholars articulate doubts regarding the value of private certification for public supervisors. Sandholz argues that both properly and poorly implemented management systems may be awarded a certificate.⁹ Boiral notices a lack of questioning practices from certifying bodies implementing ISO audits due to ‘amoral seduction of auditors and organizations inclined to reassure themselves about the legitimacy of their practices through the rhetoric of success that dominates ISO certification discussions’.¹⁰ These findings are consistent with recent experiences in the UK and the Netherlands.¹¹

IV.2.2.3 Deterrence and/or cooperation?

How should public supervisors respond given the shortcomings and challenges of traditional approaches? In earlier stages, scholars debated the question whether a cooperative style of public supervision would be more effective than the usual deterrence-based style. Although deterrence may lead to results in the fields of occupational health, environment and health care, deterrence requires an expensive enforcement apparatus.¹² Also, deterrence may be counterproductive if ‘good apples’ resist by withholding valuable information and focusing on window-dressing to demonstrate that everything is under control.¹³ These regulatees may perceive deterrence as discouraging because it affects their perception of competence and autonomy,¹⁴ resulting in a loss of legitimacy of public regulation.¹⁵ On the other hand, a strictly cooperative style of public supervision also risks counterproductive effects like capture and window-dressing.¹⁶

⁶ Meyer and Rowan (1977).

⁷ Walgenbach (2007).

⁸ Brouwer and van Koppen (2008); Iraldo and others (2009); Testa and others (2014).

⁹ Sandholz (2012).

¹⁰ Boiral (2012).

¹¹ SNIFFER (2013); de Bree (2013).

¹² Bardach and Kagan (2010); Tyler (2011).

¹³ Gunningham (2011).

¹⁴ Oded (2012).

¹⁵ Tyler (2006).

¹⁶ Oded (2012).

Given the counterproductive effects of both strategies, attempts have been made to combine deterrence-based and cooperative approaches.¹⁷ Responsive regulation proposes to adjust the intervention of the public supervisor based on the attitude and the motivation of the violator. Although the concept of responsive regulation has inspired many practitioners and provided input for countless public supervision policy statements, it has encountered practical problems. A differentiated intervention strategy requires good knowledge of processes within the regulated company. This knowledge is often limited because supervisors tend to be generalists rather than specialists with deep knowledge of a particular industry.¹⁸ Black puts it this way: 'Tailoring the enforcement response to individual firms is also highly resource intensive; it demands skills, time and other resources that are likely to be in short supply'.¹⁹ Simply put, responsive regulators are faced with the problem that they may not know how to tailor their enforcement responses.

In contrast, management systems of regulated companies may offer an interesting and very poorly exploited opportunity to solve this problem, while (a) efficiently collecting information about the self-regulative competencies of a company and (b) influencing the processes and conditions needed to assure regulatory compliance.

IV.2.3 Using management systems

The problems described in the preceding section have led to a search for more effective approaches of public supervision. In this section we explore how management systems can serve as a focal point for supervisors to learn about the design and implementation of compliance management within regulated companies and to influence their performance.

IV.2.3.1 Management systems

A management system is the framework of processes and procedures used to ensure that an organization can fulfil all tasks required to achieve its objectives. These objectives may, for example, be used to satisfy customers' quality requirements, comply with regulations, or meet environmental objectives. From this definition it follows that a management system is specific for each organization. A management system standard provides a model to follow in setting up and operating a management system. This model incorporates the features on which experts in the field have reached consensus as being the international standard. The International Organization for Standardization (ISO) develops internationally recognized management systems.²⁰ Examples of voluntary environmental management system standards are ISO 14001 and the Eco-Management and Audit Scheme (EMAS), legally formalized in Europe.²¹ There are also management system standards whose implementation is mandatory due to legal obligations, such as the safety management systems that the companies falling under the scope of the European Seveso Directive have to implement.

¹⁷ Paternoster and Simpson (1996); May and Winter (1999).

¹⁸ Van de Bunt and others (2008); Nielsen and Parker (2009).

¹⁹ Black (2001).

²⁰ <www.iso.org>.

²¹ More information on the EMAS Regulation of the European Parliament and of the Council is available at <http://ec.europa.eu/environment/emas/index_en.htm>.

Management systems used by private companies are generally focused on optimizing operational aspects of business-like quality, health, safety and the environment. More and more, companies design their management systems in such a way that these systems support the realization of integrative goals. The development of the plug-in model of the high-level ISO structure for management systems mirrors this trend. Regulatory compliance and risk management are two of the issues companies seek to achieve by tailoring their management systems.²²

A central operating mechanism for management systems is the so-called Deming cycle of 'plan, do, check and act' (PDCA).²³ This requires a company with a management system to use this sequence of actions to continually improve its performance and eliminate sources of failure. If we consider regulatory compliance management, this means that a company with a compliance management system is supposed to plan adequate actions to comply, actually execute these actions, check whether or not factual compliance is reached, take corrective actions to eliminate failure (violations) as soon as possible, and initiate preventive actions to avoid a recurrence of the failure. In the case of EMAS registration, sites must be fully legally compliant as a precondition.

We define a compliance management system as the part of a management system used by a regulated company aimed at assuring regulatory compliance. This implies that a compliance management system usually is a part of a bigger integrated management system, which apart from regulatory compliance, also aims at assuring quality, safety, security, occupational health, etc. Although the potential of a CMS to prevent violations and rapidly identify and correct problems has been recognized by inspectorates,²⁴ specific use of these systems in public supervisor policies has been limited. Since 2008, in the Netherlands several attempts have been made to more fully use management systems for compliance improvement by public supervisors.

IV.2.3.2 Experiences

In 2007, there was a politically driven demand in the Netherlands that the regulatory burden for companies should be reduced. The program designed to realize this objective was based on a notion that justified trust, rather than distrust, should be the starting point. Several projects to utilize new ways of regulation were launched. One of the opportunities that was explored in several projects was the use of private management systems to assure regulatory compliance. After earlier trials,²⁵ the Province of Noord-Brabant, the authority responsible for supervising big industrial plants, developed a system-based approach for compliance supervision. It was based upon the notion that a management system is an effective target to better and more efficiently understand processes within a company leading to compliance or noncompliance. The Province developed its own standard for a compliance management system (CMS) and an assessment framework. Furthermore, the Province designed an intervention strategy based on assessment of the CMS.²⁶

²² The ISO 19600 guidance for compliance management was published in December 2014.

²³ Deming (1982).

²⁴ eg the US EPA's Audit Policy (described in Chapter IV.1 in this volume), and permits in the Netherlands, which require ISO 14001.

²⁵ The earlier trials were in the Dutch Provinces of Drenthe and Zeeland.

²⁶ De Haas (2011); Wolfs and Meerman (2010); Provincie Noord-Brabant (2011).

The main objective of these instruments is effective and efficient assessment of the level of compliance assurance so the adequate interventions could be chosen and stimulate better compliance assurance by giving feedback on the design and operation of the CMS as part of a double-loop learning effect.²⁷ The policy was first piloted and then implemented as a regular part of the Province's compliance program. Company participation is voluntary. The approach developed by the Province of Noord-Brabant was adopted by several other provinces and public supervising agencies in other fields such as transportation and health care, mainly because of the generic character of the instruments.

The Dutch Health Care Inspectorate has tested the method in a pilot project with six health care institutions. In this project, the instruments were tailored to the health care domain by close cooperation with the participating institutions in a form of experimental governance. In this way, the Inspectorate and regulated institutions were able to develop an effective supervision method and create improvements in risk management performed by the health care institution at the same time. The inspectorate learned that CMS supervision stimulated the institutions to take a more proactive stance to assure safety and quality for their patients.²⁸ Interestingly, it was found that CMS supervision operates like a mirror for the inspectorate itself. The feedback on the management system of the health care institutions was only perceived as stimulating and credible if the inspectorate itself mirrored the professional management system standard it desired to find within the institutions.

The Dutch National Inspectorate of Environment has adopted the assessment model of the Province of Noord-Brabant and made it more efficient by using self-assessment as a filter before carrying out a time-consuming verification audit. In 2010, a European project was started to find out how CMSs of regulated companies could be used for public supervision. The first report suggested that a CMS should contain the following elements:

- Risk management
- Registration of legal requirements
- Senior management commitment
- Plan-do-check-act cycle for compliance
- Internal control
- Competencies, knowledge and experience.²⁹

Furthermore, the report noted that CMS supervision should assess performance against standard criteria for an effective CMS (including factual outputs), give a measure of the level of confidence in the CMS, require actions that reflect the level of confidence in the CMS and be backed up by credible sanctions (de Haas 2012). In the second part of this project a guidance document was developed for using the CMS in public supervision.³⁰

²⁷ Double-loop learning, as explained later in the text, refers to learning on a deeper level than just fixing the individual problem.

²⁸ Stoopendaal and de Bree (2014); Stoopendaal, Keuter and Robben (2014).

²⁹ IMPEL (2012).

³⁰ IMPEL (2014).

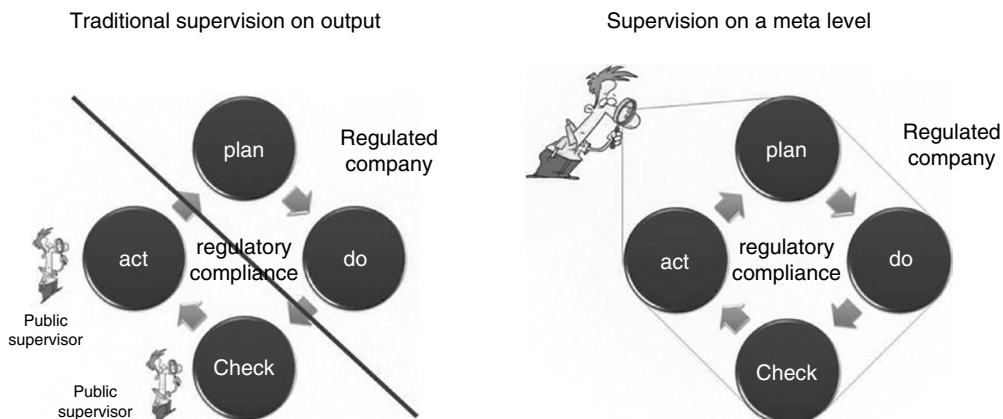


Figure IV.2.1 *The Deming cycle used for regulatory compliance and the role of the public supervisor*

IV.2.4 Discussion

Critics have suggested that this type of management-based regulation may not solve the problem but simply relocates the problem from outside to inside the firm.³¹ However, relocating the problem to inside the firm may be a very wise action if the best place for solving the problem is indeed inside the firm. Relocating compliance assurance inside the firm is only promising if the firm offers a fruitful place in terms of competences and motivation to solve the problem. This means that before transferring compliance assurance to inside the firm, the public supervisors will have to judge whether the firm is ready and capable, taking into consideration all the possible pitfalls, such as the possibility of decoupled or loosely coupled systems.

In a traditional setting, there is no notion of compliance assurance by the regulated company. Following the analogy of the plan-do-check-act cycle described earlier, the check and the act phases are taken care of by the public supervisor. The check consists of inspections; the act can consist of formal interventions like legal penalties or criminal charges. Within the concept of a compliance management system, the regulated company organizes the check and act internally within its own CMS. In this case, the supervision can predominantly be executed on a meta level (ie, supervision of the supervision). This shift is shown in Figure IV.2.1.

The experiences indicate that compliance management systems may serve as a focal point for public supervisors. Management systems are the company's attempt to realize goals and objectives. Although they consist primarily of paperwork, management systems contain detailed descriptions of how the work should be done. By assessing how regulatory compliance as a corporate goal is organized in the management system and how the work is actually done in practice, the public supervisor is provided with valuable information about the consistency between promises on paper (via the design of

³¹ Gunningham (2009).

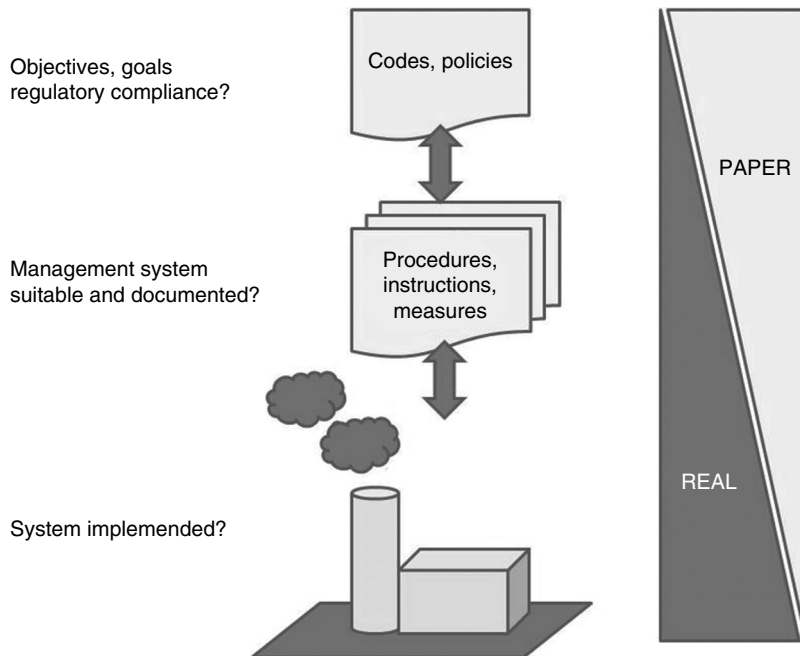


Figure IV.2.2 Levels of work as imagined (*PAPER*) and work as it is (*REAL*)

the management system) and the real world in practice. These three levels of reality are shown in Figure IV.2.2.

CMS supervision may well enable the supervisor to influence processes that result in compliance or in noncompliance. This can be considered as a form of double-loop learning.³² For example, if the company emits a certain amount of cadmium to the air, the company is forced to stop the emission. But that is not the end of the story: under CMS supervision, the supervisor and company together consider the factors causing this emission, such as lack of monitoring, failure of equipment, bad procedures, and non-conformance with procedures. These factors may be the cause of other problems in addition to the target incident. By solving these shortcomings, the company's overall environmental performance benefits. CMS supervision may bring about a deeper form of learning (double-loop learning) because it focuses on the underlying processes, strategies and procedures that aim to achieve compliance. System-based supervision thus intervenes in the structural causes of noncompliance and therefore can bring about a structural improvement in compliance management. The principle of double-loop learning is shown in Figure IV.2.3.

In order for the systems-based approach to work, management systems have to be consulted and judged by the public enforcer. In this way, much more information can be obtained compared to a conventional control visit. This may include information

³² Argyris (1991).

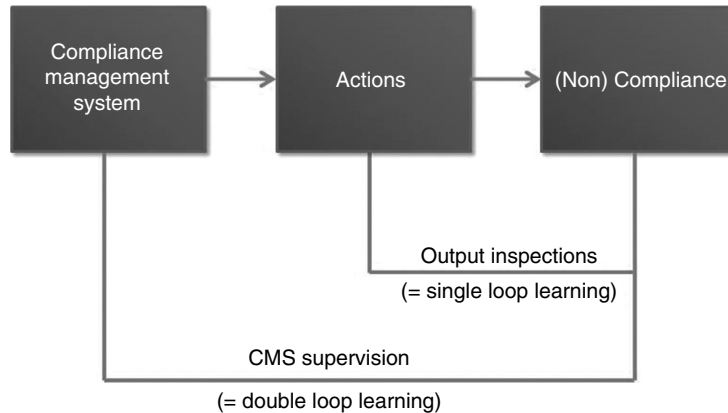


Figure IV.2.3 CMS supervision and double-loop learning

on violations that might otherwise not have been detected. If the enforcer decides to penalize the company for these admissions, the company may feel punished for its transparency. As a consequence, it may become more reluctant to give full access to the information contained in its management systems, especially information related to violations and other associated problems. This will adversely influence the effectiveness of the CMS supervision approach, because it is just this information that is most important in a regulatory context.

This phenomenon—transparency leading to less transparency—has been named the transparency paradox. Its solution demands careful communication between the public enforcer and the company, as well as a set of ‘playing rules’. Failure to address this issue at the start may lead to ineffective regulatory enforcement,³³ damaged regulatory relations and feelings of misuse of trust.³⁴ Coglianese notes that the possibility of internal audit documents being used against the firm may discourage firms from launching such systems and therefore advocates that agencies use their enforcement discretion to not demand access to audits.³⁵

In a broader context, the transparency paradox arises out of the inherent tensions between the legal paradigm of the enforcer and the management paradigm of the company. In the case of a management-systems-based approach to enforcement, the public enforcer, by consulting and judging the management systems, is more or less immersed in the perspective of the company on the issue of compliance. At the same time, the enforcer is embedded in a legal system that expects him/her to detect and sanction violations, thus leading to tensions.

It seems self-evident that regulation based on management systems requires other competencies from the public supervisors. They should be able to understand the operation of management systems, including their pitfalls and critical success factors. This is

³³ Oded (2012).

³⁴ Gabriël (2008).

³⁵ Coglianese and Lazer (2003).

important because the supervisors are central actors in assuring that the double-loop learning effect is actually realized. Adequate training and a mindset focused on possible improvement seem indispensable.

IV.2.5 Conclusions and perspectives

The central question in this chapter is how management systems can serve the objectives of public environmental supervisors. Management systems can be seen as the intermediate stage between formal policy and actual implementation because they show the concrete measures companies take to translate public policy into real-world actions. Therefore, management systems offer a suitable focal point for public supervisors for diagnosis and stimuli. By assessing the management systems of regulated companies, supervisors may come to know the level of compliance assurance. As the level of assurance is a predictor for the level of compliance, they may differentiate their inspection regime depending on the level of compliance assurance.

The most promising opportunity we perceive is that if inspectors understand how management systems are designed and how they affect behavior on the shop floor, they may effectively stimulate risk control and compliance assurance. Consequently, this approach requires additional competencies of the inspectors. They should be trained to assess compliance management systems and to communicate inspectors' assessments of the systems to the regulated company's management. Feedback on the CMS provided by the supervisor may lead to double-loop learning that can result not only in ending violations, but also in adjusting processes to assure improved compliance in the future. Preconditions for this approach are companies that are capable of assuring compliance through their management systems and inspectorates who are willing and have the political support and competencies necessary to move to this innovative form of supervision.

However promising the use of management systems for public supervision is, it has certain disadvantages and pitfalls that have to be addressed. First, CMS supervision cannot be applied in every situation. Sometimes companies are not willing or competent to organize compliance assurance. If such companies are dominantly present in a certain industry, a CMS supervision approach is not recommended. Second, CMS supervision requires the public supervisors to adjust their attitude towards the regulated community, at both the individual and organizational levels. This adds another dimension to the required style of inspectors' regulatory bodies, because the traditional command and control style will still have to be used for unwilling companies. Third, the assessment of CMSs requires skills in addition to those associated with traditional supervision. Inspectors must be educated or trained to understand how regulated companies work. Inspectors need the skills to assess the consistency between the paperwork and the real practices of regulated companies, and must not simply pursue a shallow 'ticking the box' approach.³⁶

Although we consider the use of management systems for public supervision as a promising idea, there are still many questions about how the complex process of compliance assurance works, as well as questions about how different supervisory responses and other factors may influence these processes. Empirical research and theoretical modeling will possibly provide answers to these questions in the coming years.

³⁶ The IMPEL guidance for CMS Supervision offers a practical tool, IMPEL (2014).

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