

HOW INTEGRATED MANAGEMENT SYSTEMS CAN CONTRIBUTE TO A SUSTAINABLE MANAGEMENT STRUCTURE IN SME'S

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Abstract

The purpose of this paper is a practical contribution to the discussion of implementing sustainable management systems in small and medium sized enterprises. The article shows that organizations with at least one norm-based management system have a powerful tool also to implement a complete sustainable management system. Consequently, the different elements of High-Level-Structure oriented ISO norms are analyzed to establish their input to sustainable management systems.

The findings are based on an actions research study of about 20 small and medium sized German enterprises which use at least one norm-based management system. The results of the actions research study were confirmed by a thoroughly literature review of recent scientific papers on sustainability management and integrated management systems.

The action research project indicated a clear tendency towards the integration of different norm-based management systems into one integrated management system according to the ISO High-Level-Structure. A supplementary literature review revealed that such an integrated management system can provide sustenance for implementing a sustainable management structure.

According to the high-level-structure, there was no standardized integrated management system available and well known by small and medium sized enterprises worldwide, not before the latest version of ISO norms. The High-Level-Structure of ISO norms now aims to establish more integrated management systems in organizations. With the newly introduced aspects like “context of the organization”, “interested parties” and “risk-based thinking” organizations have a powerful tool for a sustainable management.

Keywords

Integrated Management Systems, sustainable management, Sustainable reporting, High-Level-Structure

JEL Classification

M14, Q01

Introduction

Sustainable management and sustainability reporting are not very new topics. The first articles about Nonfinancial Reporting, Corporate Social Responsibility or Sustainable Management (Bowen and Johnson, 1953) can be dated back until the early 1950th. Meantime, there are numerous articles on sustainability reporting for all kind of

organizations (Aras and Crowther, 2008), (Ioannou and Serafeim, 2017), (Cho *et al.*, 2015). But this is not yet a broad movement in business organizations. Directly connected to the topic of sustainability reporting is “sustainability accounting” or “sustainability controlling”.

In many cases, Sustainability is defined in a broad way, covering environmental, social and ethical aspects (Kolk, 2008). Sustainable management and reporting is often connected to “Corporate Social Responsibility” (Pirnea *et al.*, 2011) (Dahlsrud, 2008), (Moon, 2007) or even used synonymous.

In contrast to wide range of articles about Sustainable Reporting and Accounting there are fewer papers concerning the underlying Sustainability Management System which can produce the reported results (Adams and McNicholas, 2007). According to Wilkinson, there was an arising need for an integrated management system (IMS) when environmental management and occupational health and safety management systems became essential to quality management systems (Wilkinson and Dale, 1999).

With the High-Level-Structure of ISO norms and the recently published version of different norms, for the first time, there is a guideline for implementing an integrated management system in all organization, including the small and medium-sized ones.

This article discusses “*how integrated management systems can contribute to a sustainable management structure in small and medium-sized organizations worldwide*”.

Integrated Management Systems foster Sustainably Management structures

More than 15 years after Wilkinson debated on the prerequisite of an IMS, International Organization for Standardization (ISO) introduced the “High-Level-Structure (HLS)”. HLS stands for a guideline for developing new norm versions and is part of the Annex 3 in the “ISO/IEC Directives, Part 1, Consolidated ISO Supplement, 2014, Appendix 2 – High level structure, identical core text, common terms and core definitions” (ISO Org., 2014). Since 2012 all new published norms must comply to the High-Level-Structure.

The main purpose was to ensure that the norm requirements are addressed in the same chapters in a comparable way. A general structure should support an easier integration of different norms into one Integrated Management System (IMS).

Research Methodology

While collaborating with various SME’s in Germany to update their management systems to the latest versions of the norms, an increasing tendency of the companies to put the different norms together in one Integrated Management Systems (IMS) became noticeable. This was the motive for establishing an Action Research (AR) Project that allows closer look at this development. AR proved especially suitable for analyzing project connected to quality management due to its approach similarities with the continuous, circular steps (Nagel-Piciorus *et al.*, 2016).

As part of the Action Research Methodology (Herr and Anderson), the following norms and their implementation was assessed in small and medium sized companies in Germany:

- DIN ISO 9001:2015 (DIN Deutsches Institut für Normung e. V., 2015)
- DIN ISO 14001:2015 (DIN EN ISO, 2015a)
- (E) DIN ISO 50001:2017-09 (DIN EN ISO, 2017a)

One of the research questions was:” Which are the common elements addressed in the High-Level-Structure (HLS) of the ISO organization for building the minimum requirements for an IMS? ” The ISO/IEC Directives, Appendix 2 (ISO/IEC, 2014) lists the following elements as common parts of all new norms:

1. Context of the organization
2. Leadership

3. Planning
4. Support
5. Operations
6. Performance evaluation
7. Improvements

These common elements define therefore the minimum requirements of an integrated management system based on the HLS.

As part of these 7 topics there are also three aspects empowering all the norms as a management instrument:

- the **interested parties** with their needs and expectations;
- The **context of the organization**;
- The **risk-based thinking**.

Findings

In the following section it is addressed the contribution of the elements of the IMS to a sustainable management system.

Some of them originally come from the more environmental oriented norms like the “ISO 14001:2015 - Environmental management systems – Requirements with guidance for use” (DIN EN ISO, 2015b) or the ISO 50001 - Energy Management Systems (DIN EN ISO, 2017b) In these cases the input of the norms to the topic to Sustainability is inherent. Some researchers propose even the ISO 14001 itself as a suitable management system for sustainability management (Schaltegger *et al.*, 2012), (Schaefer, 2007). But some other aspects are also common parts of the ISO 9001:2015 - Quality management systems – Requirements” (DIN EN ISO, 2015c).

Defining a policy and its objectives

The following aspects are requirements of all norm based integrated management systems, no matter if there are environmental oriented or not.

According to the High-Level-Structure (HLS) every organization should define an organizational policy for example for quality, environment or for sustainability. This policy has to be communicated to all members of the organization (DIN EN ISO, 2015a)

The organization should define objectives (e.g. quality objectives, environmental objectives or sustainability objectives), derived from this policy. As stated by the norm, it is insufficient to name several objectives. The different norms give clear instructions how these objectives should be defined in terms that make it measurable; the required resources and a responsible person must be addressed as well as a planned deadline for accomplishing the goal.

Making objectives measurable, indicators shall be connected to each objective. Examples for performance indicators, related to integrated management systems are already discussed in recent field literature (Olaru *et al.*, 2014). However, clear requirements for the objectives make sure that they can be implemented and monitored in the organization. In addition, these objectives build the fundament of an environment or sustainable controlling system (Strat *et al.*, 2016). Chapter 9 of all norms now asks especially for a performance measurement.

Context of the organization and interested parties

Before an organization can define such clear objectives, it must assess the context of the organization. The analysis makes sure that an organization “determine[s] external and internal issues that are relevant”. (DIN EN ISO, 2015a) For this, the entity „shall determine:

- the interested parties that are relevant to the [...] management system

- the relevant needs and expectations (i.e. requirements) of these interested parties;
- which of these needs and expectations become its compliance obligations.” (DIN EN ISO, 2015a)”

This concept of relevant “context topics” and “interested parties” was introduced the first time in the new ISO Norm versions, while the “relevant internal” and “external topics” are closely related to the “Five Forces” of Porter (Porter, 2008) or the “SWOT-analysis of Mintzberg (Ahlstrand *et al.*, 2001). As a result, internal capabilities and external possibility and requirements, including legal ones, are identified. This is often the case for environmental topics, but there can also be further “needs and expectations of interested parties”.

“Interested parties” stands as a new feature in the norms published according to the HLS. By considering the needs and expectations of all stakeholders - interested parties, the organization gets a helpful idea of the broad variety of their participants. This is a necessary step for defining the context of the organization. With these two analytical steps the ground for the policy and the objectives is constructed. But, for the whole building process of a sustainability management system, these two remain useful und necessary components.

Going further, and looking into the definition of what is “Corporate Sustainability” according to Dyllick / Hockerts as "meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities) without comprising its ability to meet the needs of future stakeholders as well" is very close to requirements of interested parties according to the ISO norms (Dyllick and Hockerts, 2002).

Risk-based thinking

Closely connected to the analytical and definition steps above, is the risk-oriented thinking. There were already other norms dealing with risk management (e.g. ISO 31000) (DIN EN ISO, 2018) but this topic was not part of all common norms like the ISO 9001. With the latest versions according to the HLS, the risk-based thinking is now entirely conveyed by all norms. The management systems should identify risks and opportunities in all processes: addressing “risks can include avoiding risk, taking risk in order to pursue an opportunity, eliminating the risk source, changing the likelihood or consequences, sharing the risk, or retaining risk by informed decision.” (DIN EN ISO, 2015c).

Considering the above mentioned SWOT-analysis, the part for opportunities and threats, is nothing else than a risk-oriented approach. With the HLS, risk management is now part of an integrated management system and of a sustainability management system.

The following diagram summarizes the different steps of strategy formulation, mentioned above, according to the High-Level-Structure (HLS) (Fig. No. 1)

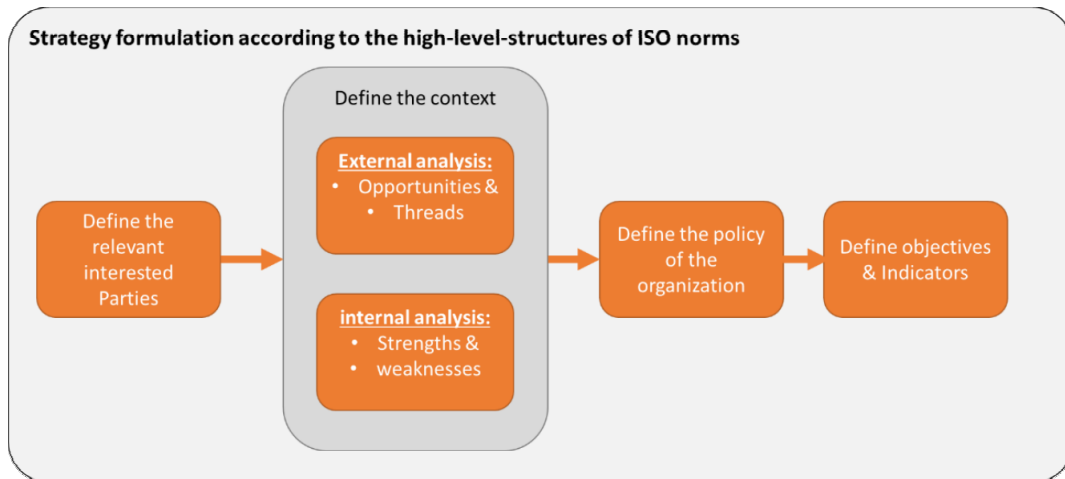


Fig. no. 1. Strategy formulation according to ISO norms

But the strategy formulation is only one side of the complete integrated management system. According to the continuous improvement of management systems there must be a permanent circle of the following management steps to reach a higher level of maturity. (Domingues *et al.*, 2016) (Fig. No. 2):



Fig. no. 2. The Management Circle

However, this paper focuses mainly on the steps “performance evaluation” and reporting.

Performance Evaluation

Performance Evaluation became a compulsory part in the common ISO norm Chapter 9 (2015a). “The organization shall monitor, measure, analyses and evaluate its [...] performance” (DIN EN ISO, 2015b).” The organization shall evaluate its [...] performance and the effectiveness of the environmental management system “ (DIN EN ISO, 2015b). With the ISO 14031 came additional guidelines for environmental performance evaluation available (ISO Org., 2013). The following list shows the definition of different indicators according to the ISO 14031.

Table no. 1. Definition of different indicators according to ISO 14031

Nr.	Long Text	Abbreviation	Explanation
3.5	environmental condition indicators	ECI	environmental performance indicators that provide information about the local, regional, national or global condition of the environment
3.11	environmental performance indicator	EPI	indicator that provides information about an organization's environmental performance
3.15	indicator		measurable representation of the condition or status of operations, management, or conditions
3.17	key performance indicator	KPI	indicator of performance deemed by an organization to be significant and giving prominence and attention to certain aspects
3.18	management performance indicator	MPI	environmental performance indicator that provides information about the management activities to influence an organization's environmental performance
3.19	3.19 operational performance indicator	OPI	environmental performance indicator that provides information about the environmental performance of an organization's operational process

A performance measurement for environmental aspects (and all other aspects of the integrated management system) should also contain an "Evaluation of the compliance", a plan for "internal audits" and a review by the top management. This aspect is supported through clear and detailed requirements in the norms, on how a performance management and evaluation system should be implemented.

Reporting

Sustainability is one topic of a wide range of non-financial reporting topics. (Amir and Lev, 1996). With their book "One Reporting – Integrated Reporting for a sustainable Strategy", Eccles, and Krzus emphasize that "Nonfinancial information [...] is becoming increasingly important [...]" and that "A Number of frameworks have been proposed on how to use nonfinancial information to supplement financial reporting" (Eccles and Krzus, 2010). But according to C.H. Cho, there is a "significant gap [...] between corporate sustainable talk and practice" (Cho *et al.*, 2015).

Integrated Management systems according to the ISO norms mainly concentrate on internal reporting of nonfinancial aspects as part of the compulsory management review in Chapter 9.3.

Except for the external audit through an auditing company there is no general obligation to publish a complete nonfinancial or integrated report to external interested parties. However, there are several legal requirements on reporting/publishing aspects to governmental organizations. For example German companies have to report on the amount and sorts of garbage (Konzak and Suhl, 2018), amount of wastewater (Mindestanforderungen an Abwassereinleitungen, 2003) or the emission of air (Krauß, 2012).

On the other hand, there are different initiatives that try to convince entities to publish nonfinancial elements on a voluntary base. Such an example is a model, which covers all aspects of an integrated management systems, proposed by the International Integrated Reporting Council (International Integrated Reporting Council, 2013). The reasoning is referring to improvements in the value creation process. Also the Global Reporting Initiative (GRI), set up 2002 in Amsterdam, developed different standards for reporting contextual information about an organization (Global Sustainability Standards Board - GRI 102) or

information about energy (Global Sustainability Standards Board - GRI 302). All these initiatives present detailed guidelines for how and what to report in nonfinancial reports.

Conclusions

The High-Level-Structure (HLS) of the new ISO norms provides a suitable framework for implementing an integrated management system for various kinds of organizations. In addition, the context of the organization, expectations of interested parties and risk-based thinking are fundamentally new aspect in all recent ISO norms. This are also important elements of a Sustainable Management System. Organizations who update their management systems towards the new ISO requirements automatically have a suitable framework for a sustainable management system.

Based on the small Action Research Study, future research questions should focus on more detailed analysis of the dissemination of Integrated Management Systems including the ISO High-Level-Structure. If the assumption of the article is correct, that integrated management systems can contribute to a sustainable management structure in SME's, future research should investigate the function of IMS for Sustainability in organizations.

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