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**PRELIMINARY FRAMEWORK FOR THE STANDARDIZATION OF CORPORATE SUSTAINABILITY MANAGEMENT SYSTEMS (CSMS): PART 2 – PRINCIPLES, CLAUSES, SECTIONS, AND SUB-SECTIONS**

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**Abstract:** Sustainability can no longer be considered a new or static concept. While the concept continues to evolve and increasingly robust theory emerges, organizations are being challenged by the need to implement the principles of a term for which a widely accepted definition remains undetermined. Nevertheless, sustainability has become an influential factor of organizational transformation. Organizations are dynamic entities immersed in a process of constant evolution and adaptation. Given that sustainability is the latest transformational factor forcing organizations to re-evaluate their business strategies in order to address the increasing demands of groups impacted by their actions (i.e., stakeholders), there is a need for developing and implementing management tools to assist organizations in the transformational process. A two-part manuscript proposes a framework for the structure of a CSMS. Part 2 discuses the development of principles, clauses, sections, and sub-sections of the proposed standalone CSMS, for which the framework is based on the examination of the Plan-Do-Check-Act (PDCA) model and the structure of management system standards (MSS) developed by the International Organization for Standardization (ISO). ISO standards have been used in other areas of organizational performance (e.g., quality, environment); however, a standalone standard addressing corporate sustainability (CS) has yet to be designed. In addition to presenting the framework structure (i.e., clauses, sections, sub-sections, requirements), the manuscript proposes the incorporation of two additional phases to the PDCA model. The potential benefits of the CSMS framework are underscored by the already proven and extensively documented effectiveness of other MSS. The development of a CSMS and its subsequent implementation both benefits and assists organizations in executing their sustainability vision and goals while aligning their needs, interests, and expectations with those of the interested internal and external parties. Consequently, this manuscript advances the body of knowledge by presenting a CSMS framework that can be adapted to each organization’s needs while scientists in sustainability management can use the framework to design further management processes with the aim of assisting organizations in the critical task of embedding sustainability principles into the organizations’ business strategies and their short-, mid-, and long-term sustainability vision and goals.

# **Considerations for Development: Attributes, Dimensions, and Principles**

The development of the management system (MS) framework for CS begins with recognizing the fundamental aspects of the issue at hand. Because of the vagueness, complexity, and lack of agreement embedded in and surrounding the term, it is necessary to delimit a number of attributes, dimensions, and principles, among other considerations, with the aim of facilitating the development of the MSS framework.

The *first set of considerations* refers to intrinsic attributes of the sustainability environment system (SES). Although time and space are often referred to as dimensions, together with dynamism and multidimensionality they are better categorized as attributes of the SES. The SES—as with other systems—changes over time (Klauer 1999); meeting the present needs of some cannot compromise the ability of meeting the future needs of others. On the other hand, the space or spatial attribute indicates that meeting the needs of today cannot compromise the ability of meeting the needs—either today or in the future—of those living elsewhere. The environmental, social, and economic dimensions are not only interrelated but also depend on one another on a spatial scale as they evolve and change over time (Giddings et al. 2002). The attributes of time and space contribute to the notion of dynamism within the SES. Sustainability is a dynamic concept or process (Laws et al. 2004, Baumgartner and Korhonen 2010, Poveda and Lipsett 2014, Poveda 2017). Dynamism is either represented by the interactions of external and internal factors influencing the SES and the dimensional environment sub-system (DESS) (Poveda 2017), or noticeable within the DESS (e.g., dynamism amongst dimensions). Sustainability dynamism is then linked to the attribute of multidimensionality; the links and dynamism occur amongst the different dimensions within the DESS. Thus, instead of a uni-dimensional approach, sustainability must be address from an interdisciplinary perspective (Duić et al. 2015). While the SES is integrated by the DESS and the stakeholder environment sub-system (SESS), the DESS is integrated by interrelated dimensions (Poveda 2017). The attributes of the SES have a direct impact on balancing the DESS, which incorporates and balances all three dimensions (i.e., environmental, social, and economic). While time, space, multidimensionality, and dynamism are primary intrinsic attributes of the SES, Poveda (2017) identifies a set of additional characteristics of the SES: open and participatory environment, adaptability, visionary perspective, globalization, and benefits and cost. Similarly, Stumpf et al. (2015) present another set of considerations and characteristics of the sustainability concept applicable to the SES: continuance, normative orientation, encompassing scope, threefold relationality, relational asymmetries, systematic mediation, limits, and uncertainty.

The *second set of considerations* discusses multidimensionality in detail by indicating which dimensions should [or should not] be included in the DESS. Dimensions other than social, economic, and environmental as well as other interpretations of the SES have been proposed (D’Alisa 2007, Ciegis et al. 2009, Poveda 2017). UN Agenda 21 advocates for the inclusion of culture as the fourth dimension of the DESS (United Cities and Local Governments 2017), while others place it at the very center of sustainable development (SD) (Nurse 2006). Policy (Glavič and Lukman 2007), institution (Shao et al. 2011), participatory democracy (D’Alissa 2007), human values (Burford et al. 2013), religion (Johnston 2014), normative (Stumpf et al. 2015), structuralism (Maydl 2006), and technical performance (Kaminsky 2015) are among the several other dimensions proposed to join the environmental, social, and economic dimensions in the DESS. Nevertheless, the concept of SD encapsulated in *Our Common Future* revolves around those well-known dimensions, the triple bottom line. As a result, Poveda (2017) differentiates between dimension and influential factor by defining dimension as “a set of identified needs required for the survival of something or someone while influential factors are those impacting the balance of the DESS.” Included in the group of influential factors, some of which have been proposed as dimensions, are needs, actions, politics, expectations, justice, culture, impacts, ethical values, geographical location, structuralism, technology & innovation, institutionalism, governmental policy, vision, goals & objectives (VGO), and Policies, Plans & Programmes (PPP) (Poveda 2017).

The *third set of considerations* captures the concept of sustainability principles. Glavič and Lukman (2007) define sustainability principles as “fundamental concepts that serve as a basis for actions, and as an essential framework for the establishment of a more complex system.” Principles vary in their implication and purpose (Upham 2000) and are determining factors of dimensional relationship, balance, and dynamism (Poveda 2017). Consequently, Poveda and Lipsett (2014) propose a set of ten sustainability principles influencing the SES: equality, interconnection-interrelation-intercommunication, mutually influenced and impacted, balance environment, participatory environment, improvement, fairness, continuality, exploitation, and simplicity and practicability.

# **Proposed Components of CSMS: Principles, Clauses, and Sub-sections**

The three sets of considerations discussed in the previous section are considered for the identification of the mandate principles in order to determine the structure of the CSMS framework and the strategy utilized in the design of the management clauses and the sections and sub-sections within. The proposed CSMS framework also considers the interactions among the three dimensions (environment, social, and economic), the internal and external factors influencing dimensional balance, and the necessity for the continuous involvement of internal and external stakeholders in the process designed to achieve an organization’s goals and vision in the area of sustainability performance.

ISO (2017a) defines a principle as a “basic belief, theory or rule that has a major influence on the way in which something is done.” As a result, the proposed sustainability management principles (SMPs) identified for the design of the CSMS framework are a set of fundamental criteria generally accepted as a basis for sustainability management. The SMPs can be utilized as guidelines for an organization’s sustainability performance improvement; the ten proposed SMPs are outlined below.

a. *Vision*: organizations are required to implement a broader and long-term vision of sustainability. Sustainability performance goes beyond environmental aspects and the immediate needs of an organization; the transformational process requires the integration of other areas of performance linked to long-term plans.

b. *Common understanding*: it is imperative to define what sustainability means to internal and external stakeholders and its impact on the organization. A common and clear definition of sustainability allows the identification of measurable targets and facilitates the performance improvement process.

c. *Stakeholder engagement, participation, and management*: internal and external stakeholders are the drivers of change. Stakeholders are behind the transformational process; their engagement and participation is necessary in decision-making processes.

d. *Responsibility and communication*: part of the success of sustainability strategies depends on assigning responsibilities as it creates accountability; the vision of sustainability is meant to be implemented with a top-down rather than bottom-up approach. Effective channels of internal and external communication must be identified as resources for the implementation of sustainability strategies at every level of the organization.

e. *Improvement*: sustainability is not about the sudden change of the organization, it is a process of evolution, adaptation, and performance improvement. By implementing small and gradual changes, the organization can not only expect significant changes in the future, but also demonstrate its commitment to performance improvement and sustainability.

f. *Leadership*: leaders at every level must take ownership of the sustainability strategies applicable to them, but also remain united around the overall vision. Organizations seeking to become more sustainable create conditions in which leaders can guide and engage stakeholders throughout the process, and the leaders in return assist the organization in becoming a leader in the process toward sustainability.

g. *Balance*: the success in the implementation of SD strategies relies not only on the proper identification of internal and external stakeholders, but also the balance of their needs, interests, and expectations and subsequent alignment with those of the organization.

h. *Inclusion and alignment*: organizations are not isolated entities. While organizations identify their sustainability goals, external factors impact the organization’s success in the market arena. It is imperative to align the organization’s vision and goals with, as well as the inclusion of, global goals of sustainability (e.g., millennium development goals [MDGs]) and national, regional, and local targets.

i. *Opportunity*: sustainability is linked to not only improvement but also efficiency. Efficiency of process, resources, time, and energy, among others, translates into reducing the organization’s operational expenses. Implementing sustainability strategies is an opportunity for an organization to reduce waste and become more profitable.

j. *Performance*: organizations must identify, design, and implement clear processes to measure, monitor, and review their performance. Progress toward sustainability and successful implementation of SD strategies cannot be identified or justified without the proper performance assessment tools, which must be designed considering achievable and realistic targets, comprehensible metrics, control measures, and review processes.

The effective embedment of the SMPs into the structure of the CSMS framework determines the degree of success of the framework’s implementation as well as the subsequent impacts and potential benefits observed by the organization. An MS framework addressing the needs of an organization in the area of sustainability management performance is required to incorporate not only elements that link the organization’s performance with long-term and global sustainability goals, but also the characteristics of sustainability previously discussed in each set of considerations. To that end, the characteristics of other standards can provide additional support in the task of designing a comprehensive MS framework to address an organization’s sustainability management needs. As a case in point, the characteristics found in the structure of ISO 26000 provide guidelines and support on how to help organizations understand specific concepts (e.g., CSR) while effectively assessing and addressing responsibilities relevant to their mission and vision. The proposed framework for CSMS takes into consideration the high-level structure used in the development of ISO MSS, which is described in Annex SL of the ISO/IEC Directives, Part 1, and the PDCA approach to continuous performance improvement.

The proposed CSMS framework introduces two additional phases to the PDCA cycle. Prior to the planning phase in PDCA, the phases of “learn” and “correlate” assist the organization in understanding and effectively integrating sustainability into the organization’s strategic vision and mission. Hence, the approach is meant to be known as the Learn-Correlate-Plan-Do-Check-Act (LCPDCA) cycle. The “learn” phase allows an organization to acquire the necessary theoretical knowledge to effectively implement the MS requirements mandated in other phases of the performance improvement process (i.e., correlate, plan, do, check, act). The “correlate” phase is also proposed; between learn and do, an organization is able to correlate the principles of a theoretical concept (i.e., sustainability) within the context of the organization, including, among others, leadership, policy, and identification of interested parties. Before designing the plan, an organization must learn and then correlate whether the performance improvement process objectives are meant to connect theory with practice.

The integration of the four sets of considerations and SMPs combined with the reinterpretation of the PDCA approach, resulting in the LCPDCA cycle and the analysis of the structure of existing MSS frameworks, provides the theoretical foundation for the design of the proposed CSMS, which includes the identification of clauses, sections, and sub-sections. Thus, Tables 1 to 10 present the structure of the CSMS framework (10 clauses are identified). Core and supporting SPMs assist the identification of the sections and sub-sections contained in each clause. The intent of each clause and a detailed description follow.

Clause 1. *Understanding Sustainability*: Clause 1 belongs to the learn phase. It is designed with the aim of providing organizations with theoretical understanding of sustainability. It also identifies and provides the definition of some terms and their theoretical background. Dimensions, attributes, principles, and factors to recognize progress are included in the sub-section entitled, “characteristics of sustainability”. Although sustainability theory continues to evolve, the MS must provide commonly accepted, widely known, and up-to-date notions in sustainability theory. Clause 1 also includes the global, national, and local environment of sustainability; indicators, goals, policies, and international agreements, among other frameworks, provide an understanding of sustainability and its environment. Additionally, this clause describes the factors influencing the SES and DESS and provides several sustainability benefits indicating how they apply to organizations.

Table 1. CSMS Framework: Clause 1

***Performance Improvement Phase***

***Learn***

Clause 2. *Organizational Framework and Sustainability Environment*: in other ISO MSS, the clauses under this title are part of the plan phase in the PDCA cycle; the proposed CSMS framework creates the correlation phase to include various clauses designed with the aim of linking sustainability theory and the organization’s vision and mission. Clause 2 aims to provide an understanding of the role not only of sustainability within the organization (internal context), but also the organization in the global scheme (external context). The organization must define sustainability within its context and, considering internal and external stakeholders, determine its long-term sustainability goals, identify the internal and external impact of the organization’s operations, define the scope of the CSMS, and commit to establish, implement, maintain, and continually improve the CSMS.

Table 2. CSMS Framework: Clause 2

***Performance Improvement Phase***

***Correlate***

Clause 3. *Sustainability and the Role of Interested Parties*: because stakeholders are at the center of sustainability, the CSMS framework proposes to include another clause within the correlation phase dedicated to stakeholder management. A section of this clause requires that organizations identify their internal and external stakeholders for the purpose of managing sustainability. Following stakeholder identification, organizations must engage internal and external parties with the aim of acquiring an understanding of their needs, interests, and expectations related to sustainability. Finally, a stakeholder management plan must be established, implemented, maintained, and continually improved. Similarly, the multidisciplinary stakeholder committee (MDSC) must be implemented and its functions defined.

Table 3. CSMS Framework: Clause 3

***Performance Improvement Phase***

***Correlate***

Clause 4. *Sustainability and Environmental Policy*: this clause is also proposed to be included in the correlation phase with the objective of providing guidance in relation to sustainability and its environmental policy. In this instance, policy surpasses regular requirements. Sustainability goals at the international, national, and local levels are continuously evolving; hence, the organization must understand and correlate them with its goals and vision. Additionally, industry-specific performance targets and regulatory requirements shape an organization’s sustainability performance, two aspects to consider in CS performance and management.

Table 4 CSMS Framework: Clause 4

***Performance Improvement Phase***

***Correlate***

Clause 5. *Organizational and Management Leadership*: the attribute of time is imperative to achieving sustainability; therefore, with the aim of linking the organization’s mid- and long-term sustainability goals this clause adds to policy the sections of vision & mission and goals & objectives. Clause 5, which is typically part of the planning phase, is included in the correlation phase in the proposed CSMS framework. This clause also requires that organizations demonstrate leadership and commitment to the CSMS, develop strategies for internal and external interested parties, and assign responsibility and authority to those relevant roles in charge of establishing, implementing, maintaining, and continually improving the CSMS.

Table 5. CSMS Framework: Clause 5

***Performance Improvement Phase***

***Correlate***

Clause 6. *Strategic Planning and Alignment*: the clause of planning is critical for the success of the CSMS for which the end goal is to accomplish the organization’s sustainability mandate described in Clause 5. Clause 6 addresses four aspects: strategic planning, action to address influence and impacts, action to address risk and opportunities, and performance strategy. Strategic planning encompasses the organization’s strategy to achieve sustainability. An organization may utilize plans, programs, and initiatives to attain its end goal. The embedding of sustainability strategies in the organization’s processes and procedures is also part of strategic planning. The actions to address influential factors not only identifies, but also evaluates the degree of impact of the influential factors on sustainability. The next section, actions to address risk and opportunities, describes, analyzes, and evaluates economic, social, and environmental conditions and impacts, outcomes of which are intertwined with the identification of synergies and trade-offs among dimensions and risk assessment. This clause also includes the performance strategy section for which the objective is to identify and define performance indicators, metrics, thresholds and baselines, and benchmarking strategy.

Table 6. CSMS Framework: Clause 6

***Performance Improvement Phase***

***Planning***

Clause 7. *Organizational and Management Cooperation*: although this clause follows the guidelines provided in Annex SL of the ISO/IEC Directives, the proposed framework deviates in several aspects. As the external environment of an organization becomes essential to achieving sustainability, this clause assigns to external factors equal priority to those within the organization (internal factors). Therefore, external resources, education & training, awareness, and performance communication are meant to be considered by the organization in the process of establishing, implementing, maintaining, and continually improving the CSMS. Additionally, dealing with information includes the process of creating, updating, and controlling documentation to support the CSMS and those involved in each process and decision-making activity.

Table 7. CSMS Framework: Clause 7

***Performance Improvement Phase***

***Do***

Clause 8. *Actions and Plan Implementation*: Clauses 7 and 8 integrate the do phase in the continuous improvement cycle. Clause 8 includes the operational planning, implementation, and control of not only the processes required to meet the requirements and implement the actions determined in Clause 6, but also the actions necessary for the engagement and management of interested parties (i.e., internal and external stakeholders) and the instruments to guarantee participation and strategic feedback. Clause 8 also mandates the implementation of an emergency preparedness and response plan; the organization must provide the necessary resources identified in the development of the plan to address eventual emergencies.

Table 8. CSMS Framework: Clause 8

***Performance Improvement Phase***

***Do***

Clause 9. *Performance Monitoring, Control, Evaluation, and Review*: while in Clause 6 the organization identifies performance indicators, metrics, thresholds and baselines, and benchmarking strategy, Clause 9 mandates the organization to provide the resources to measure, monitor, analyze, and evaluate performance. Those areas assessed to meet regulatory requirements are closely monitored and analyzed. As some aspects of sustainability are often not included in regulatory mandates, benchmarking of performance is also included in the evaluation of the organization’s performance. Additionally, internal audits, management reviews of the CSMS, and engagement and participation of interested parties in the form of strategic feedback are sections included in Clause 9.

Table 9. CSMS Framework: Clause 9

***Performance Improvement Phase***

***Check***

Clause 10. *Performance Improvement and Reassurance*: this clause includes the identification of nonconformities, implementation of corrective action, and, if needed, resolutions to improve the CSMS. The improvement phase also considers a re-evaluation of interested parties’ needs, interests, and expectations; the strategic feedback received from internal and external interested parties should serve as a basis to improve the CSMS. This clause also includes leadership resolutions and follow-ups regarding performance improvement, actions to enhance the CSMS, necessary training to address performance gaps, and reinstatement of commitment to the CSMS and the continuous performance improvement process applied to sustainability performance.

Table 10. CSMS Framework: Clause 10

***Performance Improvement Phase***

***Act***

# **Expected Benefits of the CSRS Framework Implementation**

Each MS standard is designed to have direct impact on a specific organizational area of performance, while several expected benefits are aligned with the principles upon which the development of the structure of the MS standard is based. Given that MSS are developed by ISO, each identified SMP serving as a basis for the development of the proposed CSMS standard framework is linked to specific expected benefits. Although ISO identifies a set of benefits embedded within each principle of ISO 9001 (ISO 2017a), the six key benefits behind the implementation of the MSS include: (1) enabling the organization to clearly state its objectives and identify new business opportunities; (2) leading to repeat customers, new clients, and increased business for the organization; (3) increasing productivity and efficiency and brining internal cost down; (4) meeting the necessary statutory and regulatory requirements; (5) expanding into new markets; and (6) identifying and addressing the risks associated with the organization (ISO 2017b). Similarly, the second most implemented ISO MSS (i.e., ISO 14001) provides six primary benefits to organizations: (1) demonstrating compliance with current and future statutory and regulatory requirements; (2) increasing leadership involvement and engagement of employees; (3) improving the organization’s reputation and the confidence of interested parties through strategic communication; (4) achieving strategic business aims by incorporating environmental issues into business management; (5) providing a competitive and financial advantage through improved efficiencies and reduced costs; and (6) encouraging better environmental performance of suppliers by integrating them into the organization’s business systems (ISO 2017c). Similarly, each MSS and IMS carries a set of expected benefits which are evaluated by organizations before either implementing MSS or MSs frameworks without pursuing a certification.

While ISO promotes the implementation of MSS by highlighting those benefits aligned with the principles identified during the development stages of the MSS, benefits resulting from the implementation of the MSS have been extensively documented in the literature. Documented evidence of the benefits resulting from the implementation of ISO MSS can be found in several industries around the world. The amount of literature in the subject area makes it impractical to discuss each case or even summarize them, thus the following documented cases serve to illustrate the alignment of the benefits found in studies in various areas of the world with those intended benefits embedded in ISO MSS. Santos et al. (2013) differentiate between motivations and benefits of implementing and certifying organizations to ISO 9001 in Portugal; the primary motivating factors include improvement of quality, marketing advantage, and cost reduction, while those benefits gained by organizations are linked to improvement of procedures, increase of customer satisfaction, and decrease of production cost. Increase of product volume and quality of product are studied in the manufacturing industry in Tanzania; respondents of the study determine the implementation of ISO 9001 to be positive (Mangula 2013). In the area of EMS, Matuszak-Flejszman (2009) points out the challenges of identifying the benefits of implementing and maintaining ISO 14001, but observes a number of positive impacts that include enhancing management in the field of environmental protection; raising employee awareness of environmental requirements; reducing the volume of produced waste, air pollution, and resource consumption; enhancing market position; increasing competitiveness; cost reduction due to decreasing resource consumption; enhancing the company’s image; client retention; and transferring the idea of environmental protection to subcontractors and suppliers. Additionally, Hessami et al. (2012) not only identify the benefits of implementing ISO 14001, but also rank them in decreasing order of priority: improving quality of products and services; decreasing pollution and energy consumption of electric power, water, gas, fuel oil, etc.; improving the company’s reputation and image in media and society; earning growth, performance, and opportunity; increasing staff morale and motivation; and increasing customer retention and trust.

Although there are benefits in certifying an organization to ISO MSS, an organization may commit to implement the MSS framework without necessarily pursuing the ISO certification. As a result, rather than promoting the certification process, the proposed CSMS framework aims to motivate organizations to adapt the framework to the sustainability needs, interests, and expectations of the internal—which includes the organization itself—and external interested parties. Nevertheless, the successful implementation of ISO MSS, facilitated by documented evidence of their benefits, demonstrates the positive effects of the framework adopted by ISO in its MSS. As a result, expected potential benefits of developing (i.e., adapting the proposed CSMS framework) and implementing the proposed CSMS framework can be identified based on three factors: (1) benefits of successfully implementing SD strategies (i.e., achieving sustainability), (2) key benefits—which are aligned with the principle standards—highlighted by ISO in the development of its MSS, and (3) benefits of ISO MSS already proven and documented in the literature.

Each proposed SMP previously discussed provides guidelines not only to design the proposed CSMS framework, but also to identify the set of potential benefits. The benefits associated with the Vision principle (as outlined in Section 2) include meeting the needs, interests, and expectations of internal and external parties and increasing business opportunities. Minimizing negative operational risk and improving sustainability performance by maximizing positive risk opportunities as well as improving operational performance (i.e., driving down costs) and optimizing process and procedures are expected benefits linked to the principle of Common Understanding. Stakeholder Engagement, Participation, and Management is categorized as one of the critical elements in the success of accomplishing sustainability and may produce the benefits of improving relationships in the market arena with companies, suppliers, governmental organizations, the media, peers, customers, and the community at large, as well as creating stakeholder accountability and responsibility by making them an integral part of the decision-making process. Improving perception of various interested parties, including but not limited to investors, owners, donors, sponsors, and financial community, and providing assurance that impacts (social, economic, environmental) are being measured are connected to the principle of Responsibility and Communication. The principle of Improvement may assist the organizations to improve the triple bottom line performance and gain competitive advantage, while the principle of Leadership is connected to the organization’s image and reputation and may increase the trust of stakeholders and customers. Improving satisfaction of internal and external parties and assisting organizations to consistently manage environmental, social, and economic obligations are aligned with the Balance principle. By aligning sustainability goals with the needs, interests, and expectations of internal and external parties, the principle of Inclusion and Alignment may provide an opportunity to accomplish long-term sustainability and position the organization as a leader in the process toward achieving sustainability. The principle of Opportunity is associated with attracting and retaining workers, customers, clients, and users, and may provide an opportunity to educate internal and external parties. Finally, Performance is connected to maintaining and improving employee morale, commitment, and productivity, and demonstrating compliance with statutory, regulatory, and legal obligations.

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