Fredericton, Canada

June 13 – June 16, 2018/ Juin 13 – Juin 16, 2018



# PRELIMINARY FRAMEWORK FOR THE STANDARDIZATION OF CORPORATE SUSTAINABILITY MANAGEMENT SYSTEMS (CSMS): PART 1 – BACKGROUND AND THEORETICAL FOUNDATIONS

Poveda, Cesar A. Independent Researcher, Canada poveda@ualberta.ca

Abstract: A two-part manuscript presents a framework designed for the standardization of corporate sustainability management systems (CSMS) based on theoretical research. Part 1 discusses the background and theoretical foundations of the framework whilst Part 2 proposes the principles, clauses, sections, and sub-sections comprising the basic structure of a CSMS. Management systems (MSs) allow organizations to meet their vision, goals, and objectives through the development and implementation of frameworks, which may target a specific area of performance (e.g., quality, safety, environmental). Policies, processes, and procedures used by the organization are fundamental but not the only elements included in the structure of MSs frameworks. The International Organization of Standardization (ISO) has taken the Management system (MS) concept one step further by developing management system standards (MSS) for several areas of performance with the intent of helping organizations to improve their performance through the implementation of specific repeatable steps and creating an organizational culture engaged in a continuous cycle of self-evaluation, correction, and improvement. Other regional (e.g., European Committee for Standardization [CEN]) or national (e.g., British Standards Institution [BSI], Canadian Standards Association [CSA]) standardization associations either adopt standards released by ISO or develop their own. While the implementation of MSS provides a wide range of benefits, organizations may choose to implement and demonstrate the correct use of MSS or develop and implement standard guidelines without necessarily pursuing a certification from ISO or any other organizations for standardization. ISO and other organizations provide standard frameworks in several areas of performance. but standards addressing corporate sustainability management have yet to be developed. Furthermore, attempts to incorporate sustainability into corporate management processes have been made, but a standalone MSS framework has not yet been presented. As a result, this two-part manuscript attempts to introduce the framework for a CSMS, but recognizes the difficulties encountered due to the roots of the concept of sustainability.

## 1 Sustainability: An evolving, yet necessary factor influencing the transformation of organizations

The latest re-birth of sustainability emerged in 1987 with the release of the Brundtland Commission's report, *Our Common Future*. The United Nations placed sustainability at the center of the international scene and political arena. Rather than fading into the mist of political debates and academic ideology, sustainability has not only gained strength, but has also increasingly become a transformational force. As a result, the roles and responsibilities of leaders and employees continue to be restructured with the aim of contributing to sustainability and building more sustainable societies throughout the process. Nevertheless, with root-causes on the foundations and theoretical formulation of sustainability, the adaptation and transformational processes have encountered challenges along the way. First, consensus around the meaning of the word

"sustainability" has yet to be reached; the various interpretations of sustainability have merit, but are incompatible with one another (Kidd 1992, Klauer 1999). Furthermore, the popularity of sustainable development (SD) is indisputable, but the term remains ambiguous and its content blurred. Although consensus around its definition is unlikely to be reached (Filho 2000), sustainability continues to rise within the political agenda (van der Hamsvoort and Latacz-Lohmann 1998). Second, the implementation of the notion of "sustainability" is still an arduous debate and almost impossible because of the ambiguity embedded in its theoretical formulation (Klauer 1999, Springett 2013). Third, the [mis]use—or manipulation—of the term impedes real advances in its implementation; not only is the word thrown into the conversation to justify action, or lack of action, or used as a buzzword (Kidd 1992, Poveda and Lipsett 2014), but also is often used to advance the objective(s) of someone or something (Poveda 2016, Poveda 2017). Fourth, as stated by Wilkins (2008), "sustainable development continues to be viewed as a niche area of development. The concept is still seen by many as synonymous with environmentalism, rather than as the solution for long-term development needs." Each challenge strengthens sustainability as a contemporary area of knowledge; through adaptation sustainability is not only positioning itself as a transformational agent, but is continually gaining popularity. Subsequently, governments, businesses, and communities are embracing the concept of sustainability while stakeholders exert their influence by demanding greater knowledge of how business strategies and decisions address the environmental, social, and economic impacts of organizations.

The increasing interest in the topic of sustainability contrasts its complexity. After years of timidly discussing the notion, sustainability is beginning to receive the attention it deserves; reality is overcoming the rhetoric surrounding sustainability. Organizations and society have become more aware of the need for improving performance with the aim of achieving those acknowledged by consensus as "sustainability goals" while implementing initiatives to address the diverse impacts of organizations and projects throughout their development and operational activities. Awareness surrounding sustainability is growing in parallel with the pressure from stakeholders on the organizations' performance; those groups impacted or impacting organizations' operations—also known as stakeholders—are allocating sustainability as an imperative factor in their decision-making processes while their own attitudes toward sustainability are increasingly becoming more proactive. Either by their own initiative, stakeholder pressure, or governmental regulatory demands, organizations are transforming and adapting to this new contributor in the market arena. Those organizations with an understanding of the role of sustainability are becoming sustainability-oriented organizations that are fully aware of their responsibility toward the diverse groups of stakeholders and are adopting instruments to assist in the performance improvement in the various aspects of sustainability.

Although steps forward have been taken, the transitional process to more sustainable performance demands the compromise and collaboration of diverse players; traditional decision-making approaches require more inclusive and holistic perspectives, while the notion of sustainability must be strengthened within those nations with existing industrialized economies rather than focusing on those on the path to development which are not consuming the world's resources in a disproportionate manner (Seidler and Bawa 2011). Whereas the international agenda on sustainability addresses policy and global initiatives, organizations navigate between revitalized or new governmental regulations addressing specific aspects of sustainability and meeting additional demands, needs, interests, and expectations from internal and external stakeholders. Developing and implementing SD initiatives requires the various players to reevaluate various methods of doing business, of governing, and of making day-to-day decisions. Furthermore, business strategies require the establishment of sustainability in factors such as governmental regulations, policies, and global markets (Govindan 2013). Governmental agencies have already taken action with sustainability becoming the focus of many public policy initiatives (Seidler and Bawa 2011), but there is an additional factor to which organizations must adapt: the growing pressure on organizations from diverse groups of interested players demanding that organizations take into consideration not only the social, economic, and environmental impacts of their operations, but also their needs and sustainability performance expectations. As a result, organizations have begun a transformational process in which policies, plans, and programs (PPP) have been adapted to include a clear vision in regard to sustainability. There are three additional steps toward more sustainable performance. (1) Commitment from organizations to stakeholder engagement, management, and consultation; the various interpretations of the notion of sustainability necessitate the involvement of the various players participating in the process, which increases the power of decision, creates accountability,

and facilitates the implementation of outcomes (i.e., consequences). (2) The implementation of MSs (e.g., environmental management systems [EMS]). (3) The release of performance reports (e.g., sustainability report, CSR report). Although organizations have begun to understand the notion of sustainability and noticeable efforts have been made, the full immersion of the principles of sustainability in the day-to-day decision-making processes remains a major hurdle. Yet, sustainability has become a necessity rather than an alternative. The concept of sustainability and necessary changes in management processes to fully achieve sustainable performance remain relatively new to organizations. To that end, organizations require the implementation of systems to measure and control their own performance in order to assess whether they are effectively responding to the concerns of stakeholders and to accordingly communicate the achieved results (Perrini and Tencati 2006).

This two-part manuscript addresses a management support instrument for the transformational process of organizations; the capacity of adaptation and transformation has become a measurable factor of the organizations' commitment to continually improve their performance in the area of sustainability. The development and implementation of systems for managing environmental, social, and economic performance of organizations aim, among other benefits, to assist organizations in the implementation of SD strategies and the management (i.e., identification, assessment, control, improvement) of them, which represents the beginning of the fundamental transformation and effective transition to effectively identify, manage, and meet the needs, interests, and expectations of the organizations' internal and external stakeholders. Part 1 of this manuscript presents the theoretical background for the development of a CSMS, which is not proposed or designed with the intent of drawing comparisons with the structure encountered in other ISO MSS frameworks. The design of the standalone MSS framework is based on theoretical foundations of sustainability and MSs while emphasizing the differences among corporate environmental responsibility (CER), corporate social responsibility (CSR), and sustainability. Figure 1 illustrates the different elements analyzed and integrated in the development of the proposed CSMS; the high-level structure of the CSMS framework is also presented. After building the theoretical foundations in Part 1, Part 2 of the manuscript presents the proposed CSMS structure, which includes principles, clauses, sections, and sub-sections. The two parts are complementary rather than standalone papers.

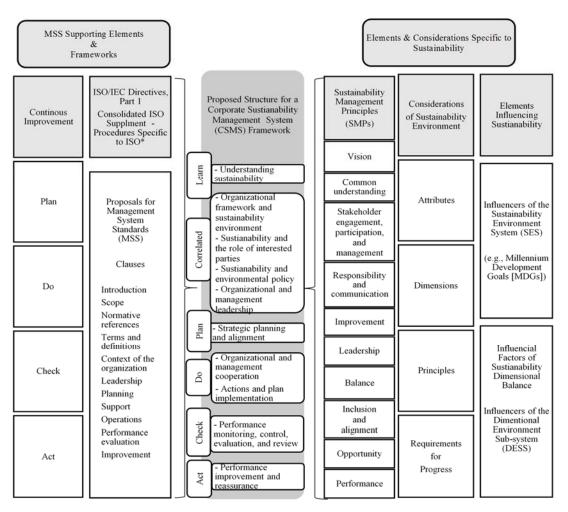
### 2 A Distinction Between CER, CSR, and Sustainability: Identifying the Knowledge Gap

Distinguishing between CER, CSR, and sustainability begins with an arduous debate to define the terms, the business strategies to implement the principles behind them, and the resulting implications on organizational management processes. Although sustainability has been given a wide range of meanings, definitions gravitate around that introduced in the *Our Common Future* report, in which a sustainable system considers the interconnections between environmental protection, economic performance, and societal welfare; the Brundtland Commission's definition has become the most frequently cited, but agreement upon one definition is far from being reached. Moreover, the concept of sustainability is perceived as complex and multidimensional and characterized as highly dynamic (Poveda 2017). Yet, SD is often interpreted as the balance among the environmental, economic, and social dimensions of sustainability (Hansmann et al. 2012, Poveda and Lipsett 2014, Poveda 2017).

While the multidimensionality of sustainability based on the environmental, social, and economic dimensions has resulted in interpretations of the term, ignoring its multi-layered characteristics and oversimplification of the concept obstructs real advances toward SD (Giddings et al. 2002). Although the dimensions are meant to be interpreted as interrelated and complementary (Shao et al., 2011), resulting in direct influence of each one over the others (Hansmann et al. 2012), the perception that each dimension acts on its own provides an opportunity to not only differ on the relevance given to each, but also the prioritization of the dimensions (Giddings et al. 2002). Furthermore, any reference to sustainability issues that fails to recognize the inter-pillar relationships is described as "bundling", "artificial", and "false" (ECOTEC Research and Consulting Limited 2004).

The environmental dimension of sustainability often prevails in the SD debate and receives the most attention to the point that sustainability is described to address only environmental concerns, but the concept itself is actually merely environmentally friendly (Chisholm et al. 1999). Nevertheless, SD has evolved to include and link social and economic components as well as historical work on the environment

(Hopkins 2016). Salzmann et al. (2005) indicate the emphasis on environmental sustainability is due to the slow development of social issues, whereas Burger et al. (2010) refer to the relevance of two sustainability dimensions, stating environmental and economic topics take priority over social issues. Moreover, social issues in the context of sustainability have not received the same treatment as those in the other two dimensions and the linkage between pillars is underdeveloped. However, recognizing equal relevance often does not translate into equal attention; there is a degree of subordination amongst the dimensions of sustainability depending on the interpretation of the term. De Brucker et al. (2013) point out the subordination of long-term social and environmental goals to short-term economic goals, while Dawe and Ryan (2003) suggest the environmental dimension as the base of the sustainability environment system (SES), which indicates submission of economy and social issues to the environment. Although the social dimension appears to be the weakest and economic dominance over environment and society is embraced by political reality, the intended interconnection of the three dimensions indicates dependency of the economy on society and environment. Given the dimensional dominance departures from the traditional approach to sustainability, SD has not only been the focus of an environmentalism framework (Nurse 2006), but the concept also continues to be viewed as synonymous with environmentalism rather than as the bridge toward a solution for long-term development needs (Wilkins 2008).



 \* ISO/IEC Directives, Part 1, Consolidated ISO Supplement, Annex SL (normative), provides only the high-level framework for Management System Standards (MSS); the elements included in every section are specific to each MSS.

Figure 1. Integrated elements for the development of the proposed CSMS

Not only are organizations becoming more responsive to environmental concerns, but are also responding to a wider range of stakeholder needs, interests, and expectations. As a result, organizations are taking into consideration the environmental concerns of internal and external stakeholders while using CER as an instrument to transform business strategies and increase competitiveness. Nevertheless, according to Sindhi and Kumar (2012), "ambiguity prevails through the whole process of corporate environmentalism and beyond compliance actions." CER can manifest in conjunction with the CSR or safety, health, and environment (SHE) programs of an organization (Sindhi and Kumar, 2012). It is valid to point out that sustainability is not synonymous with environment nor the basis for defining the concept of CER. Depending on the organization's priorities and perceived needs, the concept of CER can take various forms which are influenced by factors such as company size, products, and operations (Jamison et al. 2005); CER aims to describe the adoption of the necessary measures and policies to prevent hazards and mitigate impacts on the environment, a process accompanied by stakeholder participation to demonstrate transparency.

Depending on the definition, CER can be interpreted as already being embedded in the broader scope of CSR (Jamison et al. 2005, Montiel 2008) or as a relatively new concept within the realm of corporate responsibility complementary to CSR; two definitions issued by the World Business Council for Sustainable Development (WBCSD) do not include the environmental dimension (WBCSD 1999, 2000), but an in-depth analysis of CSR seems to equally emphasize the environmental and social dimensions (Dahlsrud 2008). Yet, there is no agreed-upon definition of CSR (Crowther and Aras 2008), mostly because of the different perceptions of the term and the particular interests of shareholders and other stakeholders; bias and confusion persist in the process of providing a unified definition of CSR, which prevents the development and implementation of the concept (Dahlsrud 2008). Moreover, the argument for differentiating between CSR, CER, and sustainability may hinder their unprecise and broad definitions; scholars continue to debate the definition of "social" in CSR and which dimensions should be considered in the SES. Dahlsrud (2008) indicates consistency in the definitions of CSR in the form of five dimensions (environmental, social, economic, stakeholder, and voluntariness); these definitions describe more of a phenomenon rather than an actual definition of the social responsibility of businesses, which fails to present guidance on how to manage the challenges within the phenomenon. The definition presented by the EU Commission indicates the voluntary integration of social and environmental concerns into the organization's business operations, whereas other definitions also include economic, legal, and physical aspects, among others. Furthermore, the scope of CSR can vary between countries, regions, or even interest groups, but is never interpreted as an alternative to meeting regulatory requirements or accomplishing SD goals; certainly, the vision behind CSR and sustainability surpasses a regulatory mandate or the needs of environmental protection groups.

Although CSR is also a multidisciplinary concept, the link—if any—among its components differs from sustainability; sustainability not only recognizes the economy as part of the system, but also links it to other dimensions, while CSR includes the social and economic dimensions, but treats them as independent (Montiel 2008). CSR and CER also differ on the interaction between their elements; CER is focused on environmental impacts and protection linked to economic aspects, while CSR connects the environmental and social dimensions. The multidimensionality, independent of how they are linked or interact, indicates the concepts of CSR and sustainability are not static, but rather are dynamic and evolving targets. Another key difference between CSR and sustainability refers to their dynamic target; sustainability intends to balance stakeholder needs, interests, and expectations over time while CSR focuses on balancing current stakeholder interest. Hopkins (2016) argues that a closer look indicates that "CSR provides the methodology to adopt within its definition, while sustainability looks somewhat nebulous, with a main focus upon caring for future generations." However, overemphasis on environmental issues undermines the concept of sustainability and places CSR as the dominant concept in the business environment (Hopkins 2016).

While scholars continue the debate the degree of dominance or which aspects are included in their definitions, organizations are turning their attention to the implementation of frameworks that assist them in accomplishing the vision and goals behind their own approach to CER, CSR, and corporate sustainability (CS). In the area of CER, organizations find support in ISO 14001, which is the second most implemented MSS, while an ISO standard for an MS in CSR has yet to be developed. Nevertheless, ISO provides guidance rather than requirements through ISO 26000. As a result, ISO 26000 cannot be interpreted as an MSS because it only provides clarification around the definition of CSR, and organizations cannot pursue

any certification unlike with other ISO standards (ISO 2017d). Additionally, ISO 26000 cannot be interpreted as a guideline for implementing a CSMS given that ISO defines CSR as the "responsibility of an organization for the impacts if its decision and activities on society and the environment, through transparent and ethical behavior" (ISO 2017a); there is no reference to the economic dimension or its link to social and economic performance aspects of the organization. Similarly, ISO 14001 cannot be interpreted as an MSS for CER. ISO 14001 specifies the requirements for an EMS that an organization can implement to enhance its environmental performance. Furthermore, ISO 14001 "is intended for use by an organization seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability" (ISO 2017b).

Nevertheless, attempts to incorporate sustainability into corporate management processes have been made, but a standalone MSS framework has not yet been presented. While Rocha et al. (2007) provide a framework for the integration of SD into existing MSs, Asif et al. (2011) propose the integration of MSs to address stakeholders' requirements and the organization's sustainability needs. The key shortcoming of both approaches is based on the need for organizations to implement various MSS to accomplish the sustainability vision and goals; the CSMS does not stand alone. An Integrated Management Systems (IMS) can only integrate those MSS which have already been implemented; by definition, an IMS combines various MSS to which an organization is registered. Such an approach will result in the necessity of using MSS of which an organization may not need or is not interested in implementing. Additionally, ISO and regional and national organizations for standardization have developed frameworks or guidelines in the areas of CSR and CER, but a holistic MSS framework taking into consideration sustainability as an integration of environmental, social, and economic needs, interests, and expectations of internal and external stadtholders has yet to be developed and implemented. As a result, the design of CSMS is a step toward the evolution of MSs. A developed framework for a CSMS is the key purpose of this two-part manuscript. Based on the fundamentals of sustainability and characteristics of MSS, the CSMS framework intents to advance the management body of knowledge and provide practitioners with an instrument to manage internal and external stakeholder needs, interests, and expectations in the area of sustainability.

#### 3 Standardization of MSs

Management systems (MSs) frame an organization's policies, processes, and procedures comprising the necessary tasks to achieve a desired set of well-defined goals and objectives. Organizations either implement and demonstrate the correct use of an MSS with the aim of obtaining a certification or develop and implement standard guidelines without necessarily embarking on a certification path, which may indicate a degree of deviation from the requirements included in the standards. Although the adoption of a standard is not a pre-requisite for the implementation of MSs, various organizations have developed a number of frameworks addressing various operational aspects of organizations. ISO, CEN, BSI, and CSA are just a few of the organizations developing or enacting the standardization of MSs. Led by ISO, regional (e.g., CEN) or national (e.g., BSI, CSA) associations for standardization either adopt standards released by ISO or develop their own.

Collaboration between organizations for standardization allows the continuous technical cooperation, regular exchange of information, and adoption of standards at regional and national levels, among other benefits. One of the strongest collaborative relationships is between ISO and CEN. The Vienna Agreement, first published in 1991, allows collaboration between CEN and ISO. Excluding corrigenda and guides, more than 30% of CEN's portfolio includes standards and publications published by ISO. CEN delivers the greatest impacts in publishing, distributing, and promoting the implementation of ISO standards as it is integrated by 33 European national standardization bodies which are also members of ISO. The collaboration has resulted in significant advances in the sectors of chemicals, environment, food, healthcare, material, and mechanical engineering (CEN 2017).

The collaboration between ISO and other organizations for standardization includes those standards addressing MSs frameworks. ISO has developed a number of MSS grouped in the areas of quality, safety and security, general management, health and medical, environment and energy, industry, services, and information technology. The structure of ISO MSS follows the guidelines found in Annex SL of the ISO/IEC Directives, Part 1, Consolidated ISO Supplement – Procedures specific to ISO. Furthermore, the

development and implementation of standards for MSs are based on the four-element Plan-Do-Check-Act (PDCA) model. In the "Plan" phase, the necessary objectives and processes to deliver results are established. The implementation and achievement of objectives occur in the "Do" phase, while the "Check" phase refers to monitoring and measurement of processes and reporting of results. The final step, "Act", allows organizations to take action in order to improve performance. Applying the PDCA model, organizations are provided with the opportunity to ensure processes are properly resourced and managed, and those areas and opportunities for improvement are determined and acted on (ISO 2017c).

The most widely recognized international standard is ISO 9001, which sets out requirements for Quality Management Systems (QMS). In 2015, 1,033,936 certificates were issued to ISO 9001 (1,029,746 issued to ISO 9001:2008, and 4,190 issued to ISO 9001:2015) (ISO 2017e). Other organizations for standardization have adopted ISO 9000 and ISO 9001; CEN adopted the standards at the European level under EN ISO 9000 and EN ISO 9001, respectively. BSI promotes and provides support for the use of ISO 9000 and 9001, while CAN/CSA ISO 9001:16 is the adopted version of ISO 9001:2015, serving the needs of the Canadian market (BSI 2017a, CEN 2017, CSA 2017a). In addition to the PDCA model, ISO 9001:2015 incorporates risk-based thinking, stating that "risk-based thinking enables an organization to determine the factors that could cause its processes and its QMS to deviate from the planned results, to put in place preventive controls to minimize negative effects and to make maximum use of opportunities as they arise" (ISO 2017c). The standard for QMS (i.e., ISO 9001:2015) is based on seven quality management principles: customer focus, leadership, engagement of people, process approach, improvement, evidence-based decision making, and relationship management. The ten clauses of ISO 9001:2015 address various aspects of the QMS as follows: Clauses 0-3, introduction and scope of the standard; Clause 4, context of the organization; Clause 5, leadership; Clause 6, planning; Clause 7, support: Clause 8, operation: Clause 9, performance evaluation; and Clause 10, improvement. Within those ten clauses, various elements can be identified: quality policy, quality objectives, quality manual, organizational structure and responsibilities, data management, processes, product quality leading to customer satisfaction, continuous improvement, quality instruments, and control of documents and records.

ISO 14001 is the second most implemented standard and certification pursued by organizations around the world. 319,324 certificates were issued in 2015 where 318,377 certificates were issued to ISO 14001:2004 and 947 issued to ISO 14001:2015 (ISO 2017e). The standard sets the requirements for EMS and provides organizations with a framework aiming for the protection of the environment and the appropriate responses to changes in environmental conditions while maintaining the balance with socio-economic needs. Additionally, the standard helps organizations to manage their environmental responsibilities in a systematic manner with the objective of meeting sustainability goals. CEN adopted the ISO standard under EN ISO 14001:2015, while BSI promotes and assists in the implementation of the standard (i.e., 14001:2015) and CSA adopted the standard under CAN/CSA-ISO 14001:16 (BSI 2017b, CEN 2017, CSA 2017b). Based on the PDCA model, ISO models the three primary outcomes after the implementation of an EMS, which are the enhancement of environmental performance, fulfillment of compliance obligations, and achievement of environmental objectives (ISO 2017b). ISO 14001:2015 is structured in ten defined clauses: Clauses 0-3, scope, normative references, and terms and definitions; Clause 4, context of the organization; Clause 5, leadership; Clause 6, planning; Clause 7, support; Clause 8, operation; Clause 9, performance evaluation; and Clause 10, improvement. Within the different clauses of ISO 14001:2015, 17 elements can be identified: environmental policy; environmental aspects; legal and other requirements; objectives, targets, and environmental management program; resources, roles, responsibilities, and authorities; competence, training, and awareness; communication; EMS documentation; control of documents; operational control; emergency preparedness and response; monitoring and measurement; evaluation of compliance; nonconformity and corrective and preventive action; records; internal EMS audits; and management review.

With the support of regional and national organizations for standardization, ISO has developed and promoted the implementation of several other MSS addressing specific operational activities of organizations. In decreasing number of certificates issued in 2015, the next three most popular standards are ISO 22000 (32,061 certificates issued), ISO 27001 (27,536 certificates issued), and ISO 50001 (11,985 certificates issued), which provide frameworks for Food Safety Management System (FSMS), Information Security Management System (ISMS), and Energy Management Systems, respectively (ISO 2017e). Within

the family of QMS, two standards also had a significant number of certificates issued in 2015; 62,944 and 26,255 certificates were issued to ISO/TS 16949 and ISO 13485, respectively (ISO 2017e). ISO/TS 16949 is an application of ISO 9001 for automotive production and relevant service part organizations, while ISO 13485 is a QMS for medical devices and addresses requirements for regulatory purposes.

In particular instances, regional or national organizations for standardization are ahead of ISO in the development of standards. BSI provides an occupational health and safety management system (OHSMS) in its BS OHSAS 18001 standard, CSA developed CAN/CSA/CSA-Z1000-14, and the ISO standard setting the minimum requirements for occupational health and safety (i.e., OHSMS) is now available, after overcoming every step of the development process, ISO 45001 was published in March, 2018. ISO 45001 is envisioned to replace BS OHSAS 18001 and other OHSMSs currently used by regional and national organizations for standardization.

With the growing number of organizations adopting MSS, and often various standards within the same organization, ISO and other organizations for standardization recognize the need for the integration of MSS. As a result, ISO promotes and supports the use of IMS, whereas BSI went further to develop PAS 99, the world's first specification for IMS. IMS allows the integration of MSS already in place; the most common MSS within an IMS are ISO 9001, ISO 14001, and BS OHSAS 18001.

#### 4 Discussion

Sustainability has become a transformational factor for organizations due to the necessity to consider, manage, and meet their stakeholders' needs, interests, and expectations, which have been progressively integrated into the organizations' short-, mid-, and long-term business strategies. However, sustainability is not the only transformational factor confronting organizations. Internal and external parties (i.e., stakeholders) are as dynamic as sustainability; those groups impacted by the actions of an organization no longer accept economic prosperity as the only performance measure for success. Stakeholders have turned their attention to the value added by an organization, which must focus on factors other than meeting economic targets and guaranteeing an organization's survival from an economic standpoint. As a result, stakeholders are taking into considering an organization's triple bottom line performance before emitting judgment and determining which actions are necessary to force the alignment of an organization's sustainability goals and vision with the stakeholders' needs, interests, and expectations.

Beyond its—intended or unintended—characteristics, sustainability has become an issue that organizations cannot ignore. A study of 1,000 CEOs across 103 countries and 27 industries found that 93% of CEOs regard sustainability as a key to success; the same survey indicates the factors currently driving CEOs to take action on sustainability include brand, trust, and reputation; potential for revenue; consumer/customer demand; personal motivation; employee engagement and recruitment; governmental/regulatory environment; impact of development gaps on business (e.g., water, food, poverty); and pressure from investors/stakeholders (Hayward 2013). The findings of the survey support the analysis carried out in the identification of the expected benefits of developing and implementing the proposed CSMS framework presented in this manuscript. Moreover, if the CSMS is adopted, with the aim of meeting the sustainability goals and vision of organizations, the benefits embedded in each sustainability management principle (SMP) used to design the CSMS framework align with the factors driving CEOs to take action on sustainability issues. In other words, the implementation of the proposed CSMS framework will certainly have the support of organizations and commitment of the senior management team.

The development of the proposed CSMS framework considers not only the theory and fundamentals of the concept of sustainability, but also the structure of MS for which the applicability and benefits have already been proven and widely documented. ISO MSS have been developed, targeting specific areas of operational performance. Although several MSS have been developed in the area of environmental performance and other standards, support organizations in the areas of CSR, ISO, and other organizations for standardization have yet to take on the challenge of developing an MSS for CS. Because of the success of ISO MSS frameworks designed based on the continuous performance improvement and incorporating risk-based thinking, ISO guidelines for developing MSS found in Annex SL of the ISO/IEC Directives have been taken into consideration to develop an MS with a holistic approach for which the framework has the

potential of assisting organizations to meet their goals and vision of sustainability while addressing the needs, interests, and expectations of interested parties both internal and external. Finally, the implementation of MSs frameworks requires budget allocation and reasonable time before potential expected benefits can be assessed. Although the implementation of the proposed CSMS and assessment of its benefits are outside the scope of this two-part manuscript, those aspects can be foreseen as areas of future research.

#### References

- Asif, Muhammad, Cory Searcy, Ambika Zutshi, and Niaz Ahmad. "An Integrated Management Systems Approach to Corporate Sustainability." European Business Review 23, no 4 (2011). 353-367
- [BSI] British Standards Institution. "ISO 9001 Quality Management." Bsigroup. January 12, 2017a. https://www.bsigroup.com/en-GB/iso-9001-quality-management/
- [BSI] British Standards Institution. "ISO 14001 Environmental Management (EMS)." Bsigroup. January 21, 2017b. https://www.bsigroup.com/en-GB/iso-14001-environmental-management/
- Burger, Paul, Claus-Heinrich Daub, and Yvonne M. Scherrer. "Creating Values for Sustainable Development." International Journal of Sustainable Development & World Ecology 17, no 1 (2010). 1-3
- [CEN] European Committee for Standardization. "CEN Adopts at European Level New Revised Editions of International Standards for Management Systems." CEN. January 8, 2017, https://www.cen.eu/news/brief-news/pages/news-2015-013.aspx
- Chisholm, Michael, Alan Grainger, Abigail Bristow, and Miles Tight. "Achieving Sustainable Development: Assessing the Human Spatial and Temporal Dimensions." International Journal of Sustainable Development & World Ecology 6, no 4 (1999). 229-230.
- [CSA] Canadian Standards Association. "CAN/CSA-ISO 9001:16." CSA. February 1, 2017a. http://shop.csa.ca/en/canada/quality-assurance-and-quality-management/cancsa-iso-900116/invt/27012052016
- [CSA] Canadian Standards Association. "CAN/CSA-ISO 14001:16." CSA. February 1, 2017b. http://shop.csa.ca/en/canada/environmental-management-systems/cancsa-iso-1400116/invt/27002912016
- Crowther, David, and GÜler Aras. Corporate Social Responsibility. David Crowther, GÜler Aras & Ventus Publishing ApS, 2008. ISBN 978-87-7681-415-1
- Dahlsrud, Alexander. (2008). "How Corporate Social Responsibility is Defined: An Analysis of 37 Definitions." Corporate Social Responsibility and Environmental Management 15, no 1 (2008).1-13.
- Dawe, Neil K., and Ryan Kenneth L. "The Faulty Three-Legged-Stool Model of Sustainable Development." Conservation Biology 17, no 5 (2003). 1458-1460
- De Brucker, Klaas, Cathy Macharis, and Alain Verbeke. "Multi-criteria Analysis and the Resolution of Sustainable Development Dilemmas: A Stakeholder Management Approach." European Journal of Operational Research 224, no 1 (2013). 122-131.
- ECOTEC Research and Consulting Limited. EU Member State Experiences with Sustainable Development Indicators. Luxembourg: European Communities, 2004. Accessed January 22, 2018. http://ec.europa.eu/eurostat/web/products-statistical-working-papers/-/KS-AU-04-001
- Filho, W.L. "Dealing with Misconceptions on the Concept of Sustainability." International Journal of Sustainability in Higher Education 1, no 1 (2000). 9-19
- Giddings, Bob, Bill Hopwood, and Geoff O'Brien. "Environment, Economy and Society: Fitting them Together into Sustainable Development." Sustainable Development 10, no 4 (2002). 187-196
- Govindan, Kannan. "Embedding Sustainability Dynamics in Supply Chain Relationship Management and Governance Structures." Journal of Cleaner Production 59, (2013). 1-2
- Hansmann, Ralph, Harald A. Mieg, and Peter Frischknecht. "Principal Sustainability Components: Empirical Analysis of Synergies between the Three Pillars of Sustainability." International Journal of Sustainable Development & World Ecology 19, no 5 (2012). 451-459
- Hayward, Rob. The UN Global Compact-Accenture CEO Study on Sustainability 2013: Architects of a Better World. Accenture, 2013. Accessed March 16, 2017.
- https://www.unglobalcompact.org/docs/news\_events/8.1/UNGC\_Accenture\_CEO\_Study\_2013.pdf Hopkins, Michael. *CSR and Sustainability from the Margins to the Mainstream: A Textbook*, Sheffield, UK: Greenleaf, 2016

- [ISO] International Organization for Standardization. "ISO 26000:2010(en) Guidance on Social Responsibility." ISO. January 20, 2017a. https://www.iso.org/obp/ui/#iso:std:iso:26000:ed-1:v1:en
- [ISO] International Organization for Standardization. "ISO 9001:2015(en) Quality Management Systems Requirements." ISO, January 21, 2017b. https://www.iso.org/obp/ui/#iso:std:iso:9001:ed-5:v1:en
- [ISO] International Organization for Standardization. "ISO 14001"2015(en) Environmental Management Systems Requirements with Guidance for Use. ISO. January 25, 2017c. https://www.iso.org/obp/ui/#iso:std:iso:14001:ed-3:v1:en
- [ISO] International Organization for Standardization. "ISO 26000 Social Responsibility." ISO. January 26, 2017d. http://www.iso.org/iso/home/standards/iso26000.htm
- [ISO] International Organization for Standardization. "ISO Survey." ISO. January 28, 2017e. http://www.iso.org/iso/home/standards/certification/isosurvey.htm?certificate=ISO%209001&countrycode=AF
- Jamison, Alison, Marlo Raynolds, Peggy Holroyd, Erik Veldman, and Krista Tremblett. Defining Corporate Environmental Responsibility: Canadian ENGO Perspectives. Calgary, AB: The Pembina Institute and Pollution Probe. 2005
- Kidd, Charles V. "The Evolution of Sustainability." Journal of Agricultural and Environmental Ethics 5, no 1 (1992).1-26
- Klauer, Bernd. "Defining and Achieving Sustainable Development." International Journal of Sustainable Development & World Ecology 6, no 2 (1999). 114-121
- Montiel, Ivan. "Corporate Social Responsibility and Corporate Sustainability: Separate Pasts, Common Futures." Organization & Environment 21, no 3 (2008). 245-269
- Nurse, Keith. Culture as the Fourth Pillar of Sustainable Development. London, UK: Commonwealth Secretariat. 2006
- Perrini, Francesco, and Antonio Tencati. "Sustainability and Stakeholder Management: The Need for New Corporate Performance Evaluation and Reporting Systems." Business Strategy and the Environment 15, no 5 (2006). 296-308
- Poveda, Cesar, and Michael G. Lipsett. "An Integrated Approach for Sustainability Assessment: The Wa-Pa-Su Project Sustainability Rating System." International Journal of Sustainable Development and World Ecology 21, no 1 (2014). 85-98
- Poveda, Cesar. "Perceptions of the Canadian Oil & Gas Industry on Sustainability: A Survey." Paper presented at the Canadian Society for Civil Engineering, London, ON, June 2016.
- Poveda, Cesar. "The Theory of Dimensional Balance of Needs." International Journal of Sustainable Development and World Ecology 24, no 2 (2017). 97-119
- Rocha, Miguel, Cory Searcy, and Stanislav Karapetrovic. "Integrating Sustainable Development into Existing Management Systems." Total Quality Management & Business Excellence 18, no 1-2 (2007).
- Salzmann, Oliver, Aileen Ionescu-somers, and Ulrich Steger. "The Business Case for Corporate Sustainability: Literature Review and Research Options." European Management Journal 23, no 1 (2005). 27-36
- Seidler, Reinmar, and Kamaljit S. Bawa. Encyclopedia of Life Support Systems. Boston: University of Massachusetts, 2011.
- Shao, Guofan, Fulong Li, and Lina Tang. "Multidisciplinary Perspective on Sustainable Development." International Journal of Sustainable Development & World Ecology 18, no 3 (2011) 187-189
- Sindhi, Sumita, and Niraj Kumar. "Corporate Environmental Responsibility T0ransitional and Evolving." Management of Environmental Quality: An International Journal 23, no 6 (2012). 640-657
- Springett, Delyse. "Critical Perspectives on Sustainable Development." Sustainable Development 21, no 3 (2013). 73-82
- Carel P.C.M. van der Hamsvoort, and Uwe Latacz-Lohmann. "Sustainability: A Review of the Debate and an Extension." International Journal of Sustainable Development & World Ecology 5, no 2 (1998). 99-110
- Wilkins, Hugh. "The Integration of the Pillars of Sustainable Development: A Work in Progress." McGill International Journal of Sustainable Development Law & Policy 4, no 2 (2008). 163-188
- [WBCSD] World Business Council for Sustainable Development. *Corporate Social Responsibility: Meeting Changing Expectations*. Geneva: World Business Council for Sustainable Development, 1999
- [WBCSD] World Business Council for Sustainable Development. Corporate Social Responsibility: Making Good Business Sense. Geneva: World Business Council for Sustainable Development, 2000