

Profitable Corporate Sustainability Strategies and Processes Achieve Competitive Advantage in the Construction Industry

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Many construction industry leaders are aware of a need for corporate sustainability practices. However, some construction industry managers lack strategies to integrate profitable corporate sustainability practices for competitive advantage. Eight senior/mid-level construction industry managers from eight different construction industry organizations participated in semi structured interviews. Three themes emerged: 1) systems thinking leads to competitive advantage, 2) motivating and nurturing buy-in through learning and engagement activities, with expressions of thankfulness, and 3) gaining profitability through corporate sustainability measurement systems. The key recommendation for construction industry managers is to use the Czelusniak-Serviss Profitable Corporate Sustainability Business Model to achieve competitive advantage.

Keywords: business model, measurement system, general systems theory, corporate sustainability, learning

OVERVIEW AND INTRODUCTION

Profitable Corporate Sustainability (PCS) strategy and process development are among the most difficult and important challenges in the development of organizational processes (Stock & Seliger, 2016). The concept of PCS links to the compatibility between the development of economic activities, the related social phenomena, and the protection of the environment (Blundo et al., 2018). From the organizational point of view, the key element for the analysis of PCS strategies and processes of an industrial process is a comprehensive approach to system analysis that considers the object of the study as part of a complex system (Urbaniec, 2018). The introduction of strategies and processes for monitoring company activities is important for companies that are striving to produce high-quality products (Blundo et al., 2018). Construction industry (CI) managers need to formulate PCS strategies and processes, which require the incorporation of sustainability into their business model, to create CA (Giannoni et al., 2017). The current situation of CI managers must be known before following the path to PCS strategies and processes (Giannoni et al., 2017). The aim of this research therefore was to identify PCS strategies and processes, and their level of implementation.

Finding a solution to how to create a CA through PCS strategies and processes requires assessment at many levels within an organization, which include the measurement of the organization's operational performance, through the collection of data (Buyukazkan & Karabulut, 2018). Some CI managers are aware of the need for PCS strategy and process approaches to access complex systems. However, little attention is dedicated to how or what to exactly measure (Buyukazkan & Karabulut, 2018). Managers often seek third-party certifications for their organizations that signal to external audiences their commitment to given

social or environmental causes (Parker et al., 2019). Third-party certifications, like B-Lab provide a context for disentangling the processes associated with membership claims and subsequent category promotion (Gehman & Grimes, 2017). When awarded certification from B-Lab, the organization receives the B Corp certification, provided after completing a successful voluntary social and environmental audit (Parker et al., 2019). However, little or no information was available on standard creation without assistance, nor how managers can modify or guide business practices to become sustainable and create CA.

LITERATURE REVIEW

A discussion of related literature builds a logical framework for a reader and can help develop more insightful questions about a topic (Marshall & Rossman, 2016; Yin, 2018). A literature review demonstrates the underlying assumptions behind the general research question, displays the research paradigm that undergirds the study and describes the assumptions and values, and shows that the researcher is knowledgeable about the topic and has identified some gaps in previous works (Marshall & Rossman, 2016).

Profitable Corporate Sustainability Strategies and Processes

PCS strategies and processes are complex concepts that include environmental, financial, and social dimensions, which in turn involve several aspects that interrelate in a complex way (Palmborg et al., 2017). Within the business environment, the concept of *sustainability* is the current economic development that meets the needs of the present generation without compromising the ability of future generations to meet their own economic needs (Epstein & Rejc, 2014). Along with economic benefits, managers develop strategies and processes that devote resources to the social and natural environments (Schuler et al., 2017). Claims of sustainability strategies and processes included environmental, financial, and social dimensions that managers utilized, therefore, applied to the research question that asked about the sustainability strategies and processes.

PCS strategies and processes demand urgent attention. Government regulations require that managers address sustainability increasingly, and noncompliance is costly (Epstein & Rejc, 2014). There are four reasons why sustainability demands urgent attention: (1) regulations, (2) community relations, (3) cost and revenue imperatives, and (4) societal and moral obligations (Epstein & Rejc, 2014). For sustainable community relations, managers need to secure the trust and goodwill of the people in the communities with candid and continual dialogue, as they show residents how the company staff manages resources (Epstein & Rejc, 2014). Sustainable cost and revenue imperatives include increased sales due to improved corporate reputation, lowered costs through more efficient resource use, and improvement to products and processes (Epstein & Rejc, 2014). Finally, Epstein and Rejc (2014) found that the development of personal concern for social, environmental, and economic impacts and their social and moral obligations has led some managers to include sustainability in their corporate strategies. These four reasons were significant as they represented the paradigm of the concept of sustainability, provided a framework for inquiry into the CI, and guided the rest of the literature review section.

Sustainability strategies and processes have been a part of business operations throughout human history. Human orientation to nature has been one of profitable use: if natural resources are available that can be profitable, humans will utilize that resource (Schuler et al., 2017). The most successful forays of applied archaeological research into sustainable strategies and processes encompass three significant realms: (1) the social foundations and local histories of any human community, (2) the environmental and geological couplings that exist therein, and (3) the economic resources and practices to support that community (Chesson et al., 2019). Investment in emerging technologies in a globalizing commercial endeavor over the last 200 years simultaneously helped and harmed the economic and social viability of the commercial enterprise and the human community that labored for it (Chesson et al., 2019). Historically increased investment in new technologies, like mechanized presses, held greater production potential (Chesson et al., 2019). However, Chesson et al. (2019) argued that commercial endeavors increasingly suffered from a greater vulnerability in reliability, machine breakage, repair, and the knowledge of how to

use and maintain the machines. Chesson's (2019) argument of sustainable strategies and processes demonstrated that the concepts had been part of the human experience throughout history.

Beyond archeological research, historic documents align with corporate sustainability (CS) strategies and processes with the concept of justice. For example, Kutadgu Bilig is an advice text written in 1070 by Hajib of Balasagun, where, according to Hajib, the key to sustainable management is *justice* (Kusakci, 2018). The key to sustainability in management within the context of Kutadgu Bilig grasps reality *from the inside out*. Namely, it attempts to explore some facts within a specific context with inductive reasoning through qualitative research methods (Kusakci, 2018). The Kutadgu Bilig provides seven concrete justice-based principles which target sustainable management (Kusakci, 2018). The first principle of sustainable management success is to maintain justice (Kusakci, 2018) unconditionally. The second principle is that oppression at any level of the organization causes management to fail (Kusakci, 2018). The third principle is the uncontroversial fact that for an entirely just organization, employees at all levels should embrace the same principles (Kusakci, 2018). The fourth principle is that leaders should serve as role models by setting a high value on justice (Kusakci, 2018). The fifth principle is that the conscious leader aims to satisfy *humanity*, which includes not only employees of the organization but also customers and stakeholders (Kusakci, 2018). The sixth is any delay in implementation of justice is inexcusable (Kusakci, 2018). Finally, the seventh is that leaders should believe in justice wholeheartedly, support their belief through what they say, and demonstrate all through their behaviors (Kusakci, 2018). In written form, these claims of CS strategies and processes, again demonstrated that the concepts have been part of the human experience throughout history.

Sustainability should restrict profitable use, that we can use any natural resources for our profit, however, we must keep such use possible into the indefinite future (Schuler et al., 2017). In more recent human history, there is evidence that CS strategies and processes became necessary at the systemic level of government involvement. Not until the end of the 19th century did it occur to government leaders in the United States that governmental procedures are not sustainable even in the short term (Schuler et al., 2017). Pinchot talked Congress into passing the Forest Management Act of 1897, setting aside National Forests as reserves for lumber (Schuler et al., 2017). The Forest Management Act was the first move in environmental protection, then, on the national scene, which exemplified the Brundtland Report's understanding of sustainable development (Schuler et al., 2017). The new government procedures were significant because they represented the United States regional perceptual change to CS practices and models.

CS strategies and processes of our current human paradigm are in crisis. Few discussions about CS strategies and processes reached beyond an instrumental understanding of the human-environment relationship; most emphasized that sustainable resource use is a means to serve human wellbeing. Schaltegger et al. (2016) argued that these crises, along with the lack of in-depth conversations about PCS strategies and processes, prompted various international organizations and researchers to reconsider companies' possible contributions of sustainable development systemically, and holistically, through measurement systems. First, however, a set of normative principles of organizational development together form an *ideal type* of sustainability-oriented business model (Stubbs & Cocklin, 2008; Schaltegger et al., 2016). The *ideal type* comprises different structural and cultural attributes of an organization, such as the development of community spirit, investment in employees' trust and loyalty, and engagement in PCS assessment and reporting (Schaltegger et al., 2016). Finally, Schaltegger et al. (2016) suggested a systemic sustainability-oriented business model that deals with an organization's purpose, goals, performance measurement approach, stakeholders, and nature, with leaders who drive the necessary cultural and structural changes to implement PCS. With our current human paradigm in crises regarding sustainability, a review of the strategies and processes of PCS business model archetypes followed.

Corporate Sustainability Strategies and Processes of Business Model Archetypes

There are many types of business models available that managers can utilize. Although extant research on CS strategies and processes of business models is rooted in ecological sustainability, scholars have seen business models as tools for addressing social needs. What these different approaches have in common is their focus on organizational value creation, which focuses on social and ecological values by sustainability

researchers (Schaltegger et al., 2016). Companies can and must adapt or even transform their existing business models through organizational learning and new routines and knowledge to cope with increasingly PCS-driven demands (Schaltegger et al., 2016). Understanding such adaptive and transformational organizational processes requires detailed analyses of business models' architecture, principles, and components (Schaltegger et al., 2016). There is still a need to develop furthermore integrative theories of PCS strategies and processes that can effectively contribute to the sustainable development of the economy and society (Schaltegger et al., 2016). The PCS strategies and processes of business model archetypes are significant because it describes the functional structure of an organization. Painter et al. (2019) stated that changes in values and mindsets require new, sustainable, and ethical business models and consumption practices to flourish. To achieve long-term sustainability, Roelich et al. (2015) argued that infrastructure needs new designs and operations to provide essential service delivery at radically decreased levels of resource use. Business professionals widely recognize that embedded practices and beliefs constrain change. However, there is a keenness to investigate the emergence of business and consumption practices that shift away from traditional resource-depleting forms of capitalism (Painter et al., 2019). The claims of these researchers demonstrated the need for PCS strategies and processes of business models, but implementation can be complex.

Managers struggle with the implementation and adoption of PCS business models. Business model innovation and change can be a significant undertaking for a firm and require managers and staff to understand change management techniques (Evans et al., 2017). The elements of a generic business model concept: (1) value proposition: what embedded value is in the product/service offered by the company, (2) supply chain: how upstream relationships with suppliers are structured and managed, (3) customer interface: how downstream relationships with customers are structured and managed, (4) financial model: costs and benefits from (1), (2), and (3) and their distribution across business model stakeholders (Painter et al., 2019). When combined with a perspective on social and environmental sustainability, these four business model elements describe the PCS practice and model (Painter et al., 2019). Owners, managers, and staff committed to sustainable strategies and processes integrating their social, environmental, and economic activities to create value for their customers and society (Painter et al., 2019). The claims of these researchers demonstrated the systemic struggle of implementation and buy-in of PCS models, so there was a need for new approaches.

New approaches to PCS models will need to incorporate the end user. To do so, managers need to systemically consider the end-users wants and behaviors, while simultaneously focusing on the service provided, use information and communication technologies more effectively, integrate the operation of different infrastructure systems, governed in a manner that recognizes the complexity and interconnectedness of infrastructure systems, and rethink current infrastructure valuation (Roelich et al., 2015). In addition, changes in consumption needs to occur and range from the selection of more ethical and sustainable options, slower acquisitions, and the replacement of goods to more radical shifts in lifestyles, such as voluntary simplicity (Painter et al., 2019). A PCS model archetypes description and operationalization guideline should include: (1) maximize material and energy efficiency, (2) create value from waste, (3) substitute with renewables and natural processes, (4) deliver functionality rather than ownership, (5) adopt a stewardship role, (6) encourage sufficiency, (7) re-purpose the business for society/environment, and (8) develop scale-up solutions (Painter et al., 2019).

Corporate Sustainability Measurement Systems and Indicators

The construction industry is vital to encouraging societal change toward sustainable development, with the intellectual competence of managers representing the most important factor in sustainable building accomplishments (Tabassi et al., 2016). The intended CI potential participants for this case study were known to practice CS strategies and processes, which meant the CI managers may utilize a pre-designed CS business model to dictate their business activities. However, little was known about the specific managerial processes whereby companies may translate their motivational factors into improved performance and CA (Lisi, 2015). For strategy and processes development, Lisi (2015) suggested using specific control mechanisms through a business model that incorporates corporate sustainability

measurement systems and indicators (CSMSI). CSMSI business models are multidimensional and complex; hence there are few successful cases (Evans et al., 2017). Business model innovations for sustainability tend to be ad hoc and not systemic (Stubbs & Cocklin, 2008; Evans et al., 2017).

Corporate Sustainability Performance Measurement Systems & Indicators

To illustrate how to calibrate CS, researchers have introduced a multi-tiered typology of CS performance measurement systems and indicators (CSPMSI). The job of CSPMSI is, as the term suggests, to indicate performance on CS activities, with the end goal of achieving CS development (Baue, 2019). However, Baue (2019) stated that current indicators almost universally need more ability to indicate the achievement of CS development, as they need to reference thresholds that delineate between sustainability and unsustainability. Baue (2019) suggested all companies should apply a context-based approach to CS reporting, allocating their fair share impacts on common capital resources within the thresholds of their carrying capacities. Further, that multilateral organizations should collaborate to create a global governance body of scientists, academics, business practitioners, non-governmental organizations (NGOs), and other stakeholders to provide guidance on methodologies for determining ecological and social threshold and on approaches to allocations (Baue, 2019). To be competitive, Baue (2019) suggested reporting standards, and guidance bodies such as Global Reporting Initiative (GRI), International Integrated Reporting Council (IIRC), Sustainability Accounting Standards Board (SASB), Carbon Disclosure Project (CDP), etc. should integrate *sustainability context* more explicitly into their business models. Current CS performance measurement systems and indicators typically compare performance to incremental goals, which do not say anything about the sustainability of the impacts (Baue, 2019). The Sustainability Quotient ($S = A/N$), developed by Baue (2019) compares actual impacts (in the numerator in tier one) to normative impacts (in the denominator in tier two) to calibrate sustainability. There is a total of three tiers of indicators and measurements systems that illustrate how to calibrate CS strategies and processes.

Tier One Indicators and Measurement Systems

Tier One Indicators and Measurement Systems start with measuring the organization systems to establish the numerator. This first tier encompasses *numeration* indicators that look at actual impacts, which include absolute and intensity indicators (Baue, 2019). An example of an absolute indicator; is carbon footprint, which is the amount of carbon an entity emits over a distinct period. An example of a relative/intensity indicator is the carbon emitted per widget produced, which is the actual impact compared to a unit of output. Incrementalism alone, Baue (2019) argued, is insufficient to measure and report CS; instead, take a further step to assess performance against thresholds and limits.

Tier Two Indicators and Measurement Systems

Tier Two Indicators and Measurement Systems start with measuring the organization's systems to establish the denominator. The second tier adds a *denominator* to compare actual impacts to normative ones, to determine if performance (Baue, 2019) is sustainable. The sustainability quotient places tier one indicators in the quotient's numerator. It relates these actual impacts to externally defined norms or thresholds that contextualize the carrying capacities of vital capital resources in the denominator to arrive at tier two indicators (Baue, 2019). Unfortunately, tier two approaches are practically non-existent, which is alarming, given the existential threat humanity faces from climate change and other crises (Baue, 2019).

Only 8% of 108 surveyed companies establish greenhouse gas emissions reduction targets per the Paris Climate Agreement of well below 2°C (Baue, 2019). The 8% is significant because while companies have been producing CS reports for almost two decades, only a small number of companies establish greenhouse gas emissions reduction targets at all (Baue, 2019). These findings are crucial as they highlight the significance that organizations translate these limits to development and strategy, which suggests that tier two indicators need more attention (Baue, 2019). There are no tier two type measurement systems in the available research. Therefore, no tier two type measurement systems available would indicate the need for continued research on the topic.

Tier Three Indicators and Measurement Systems

Tier Three Indicators and Measurement Systems start to direct our attention to indications of change other than only numerically quantifiable. The third tier suggests not thinking *if* but *how* an organization achieves CS development practices and methods, specifically transforming existing unsustainable systems (Baue, 2019). The third indicator goes beyond the traditional quantitative space of indicators into the more qualitative space of policy process, practice – and even more profound, perception. Tier three indicators add comparative measurement elements of practices to normative indicators, which gives managers information to initiate change within the system (Baue, 2019). Tier three indicators transcend the reductionistic, mechanistic paradigm of measurement embedded in indicator thinking, as they adopt a more holistic, systemic approach that looks more for interconnected, mutually reinforcing triggers (Baue, 2019). The tier three measurement systems are primarily uncharted territory, which presents challenges (in terms of appealing to pathbreakers who have already done the work for us) and opportunities (to propose approaches that fulfill the job of indication in ways that encompass this broader, more holistic scope). There are no tier three type measurement systems in the available research, indicating the need for continued research on the tier three indicators and measurement systems topic.

PRESENTATION OF FINDINGS

Before launching PCS processes, ensure buy-in to the CS strategy and implementation (Burawat, 2019). All participants expressed interest and systemic concern for the CI environmental, social and profitable aspects. Each participant's lived experience demonstrated an initial strategy to establish a shared definition of CS and to obtain buy-in from all members of the organization, then establish measurement system processes.

Theme 1: Systems Thinking Leads to Competitive Advantage

Managers can teach systems thinking without involving CS, but managers cannot teach CS without involving systems thinking (Palmberg et al., 2017). All participants referenced the systemic approach and consideration for the Triple Bottom Line concepts of the planet, people, and profit into CI CS strategies and processes. Participants demonstrated their understanding of systems or systems thinking through examples. To assure confidentiality, the pseudonyms P1, P2, P3, P4, P5, P6, P7, and P8 were used throughout the study, where P indicates participant, and the number indicates the order of the participant interviews. P6 shared that they leveraged a sort of systems thinking approach to CS. P7 strongly suggested that the corporation always remembers it needs to be a good citizen, and each part plays a particularly significant role in the short and long-term success. While P5 shared that by being involved in those systemic concepts, they (staff) are more actively committed to the process because they are knowledgeable and brought in (feeling of inclusion). P7 stated that CS requires a holistic systemic approach, and our responsibility is to not only our company but also our community and environment.

P8 shared, be sure that you are feeding back the results to the people who can use them in the yearly/daily work, systemic thinking. P2 stated that CI CS managers are constantly working on setting up systems that give people a collaborative mindset - that sees what needs to be done and then they will make the right decision, and, in the process, they can help identify areas where we can make changes to the system that will overall improve the outcome and the transparency.

P2 suggested bringing together all participants in the process and asking them to make the process as efficient as it can be, and as good as it can be, which creates the sustainable process. It is a balance between showing that there can be economical success, P2 continued, and the satisfaction of individuals in organizations achieving something that is better than it was yesterday. P4 indicated that if you can start out smaller and show that financial return on investment, demonstrating that the CS projects reduce costs, increasing profitability to encourage C-suite buy-in.

Theme 2: Motivate and Nurture Buy-In Through Learning, Engagement and Thankfulness

The second theme identified is to motivate and nurture buy-in through learning, engagement, and thankfulness. For CI CS managers, P6 suggested doing things like transportation programs, bike infrastructure with helmets for everybody, and guaranteed rides home to reduce greenhouse gas emissions. P7 stated that the CI CS has really allowed us to form many relationships with customers or others in the industry, enabling us to adjust our strategy and in the way we look at CS's chain reaction. The how behind creating and implementing these strategies is just learning and educating.

Celebrate, P8 strongly suggested pointing out when people are doing good work and is a great motivator, have an interest in what matters to those you're trying to motivate. P5 noticed that too often you find a lot of companies especially in construction that talk about culture, but they do not cultivate culture, they do not nourish culture, but your people are your greatest commodity without your people you don't have a construction business.

Theme 3: Profitability Through Corporate Sustainability Measurement Systems

The third and final theme is profitability through CS measurement systems. All participants provided content relating to CI strategies; however, only P5 provided examples of CI CS implementation processes. P5 stated,

The prefabrication shop was created due to the identification of the drywall and framing division waste. Those two consumables; steel and gypsum, are heavy waste items, so we considered our CS strategy and reviewed the existing process. Eventually we found efficiencies through CS best practices in prefabrication. A specialized router machine was used to create predetermined drywall shapes, reducing the overall waste of the project, our organization, and industry. Typically, steel framing is sold in a stack of steel studs in lengths of 10, 12 or 14 feet. The lengths are ordered at the standard size above the needed length, then cut to the needed length during installation, with the rest discarded. Using our design platform, we can have the machine cut the steel studs to the specified length, further reducing waste. P5's CI manager approach demonstrates how the addition of CS strategies to the CI processes produces material, waste, and staff efficiencies that lead to profitability and CA.

Although only P5 provided specific CI processes and CS implementation examples, each participant shared third-party organization's measuring criteria, system, and/or product utilization. The measurement systems and who referenced Lean Six Sigma - P2, LEED - P4, P6, and P8, CSR - P5 and P6, US Green Building Council - P4 and P7, B-Lab - P6, with all participants referencing the learning organization, often in an ad hoc fashion. However, no participant mentioned the Global Reporting Initiative (GSI), P2 and P6 referenced admiration for the European approach to CI CS strategies and processes. P3 strongly suggested accepting certain materials and certain building practices, which over time powers the industry to change to CS strategies and processes.

When implementing CS practices, P4 suggested do not take on too much at once, you and your staff will get discouraged and potentially stop these strategies and processes, start with the low hanging fruit to show the C-suite that commitment towards CS also makes financial sense. Different agencies provide templates to assist in CS strategies and processes, use available templates. P4 stated,

The more data you have and content to review the easier it will be to then develop company strategies and processes around your CS commitment. When I first started in sustainability there was no data showing that green building design could create profitability for a company, but the data is out there now so it is all about stepping up and making the commitment to CS strategies and processes.

Almost never profitable, P1 continued that mostly a cost reduction process, can make savings, bring costs down, which will increase margin; in a way that is making profit. Must get away from expecting a direct access to profitability. Whereas P2 stated CS does not always make the most financial profit for the organization and the individuals in it. However, P6 stated that CS was not an awfully expensive investment, and in terms of profitability, CS gave us more than it took, and it just became part of who we were to the point where it was just the cost of doing business, like keeping the lights on, did not expect it to make us money.

My favorite measure is my employees, which, P5 stated, means me taking the time to know each of them, understanding what is important to them and how they are giving back. CS strategies and processes are an opportunity for a company to find efficiency and increase profitability. Finally, P7 stated that if businesses do not develop and incorporate CS strategies and processes, they will become less profitable as a corporation.

DISCUSSION

The breadth and interconnectedness of CS strategies and practices make it evident that professionals from different disciplines and sectors must work together to deliver systemic goals (Annan-Diab & Molinari, 2017). Multifaceted issues, such as climate change, poverty and human rights, and profit generation, require knowledge and skills from distinct disciplines in an integrated and systemic manner (Annan-Diab & Molinari, 2017). That interdisciplinarity promotes understanding complex problems and acting on them, then aligning to the expected outcomes from CS development (Annan-Diab & Molinari, 2017).

There are few conceptual differences between the systemic processes of a CS management strategy and the traditional management strategy (Rodrigues et al., 2019). PCS in the CI is a systemic process that seeks to maintain harmony between nature and the built environment by creating human settlements with a strategy to achieve a balance among economic, social and environmental aspects (Giannoni et al., 2017). Managers' use of CI CS strategies and processes aims to reduce the impact of a project on the environment over its entire lifetime while optimizing its economic viability without compromising aesthetics, comfort and safety (Sfakianaki, 2015). CI managers should possess the necessary leadership competencies, skills and knowledge to achieve PCS in building projects (Tabassi et al., 2016). The CI manager must know CS as a concept and implement the PCS business model through strategies and processes (Marchichova, 2019).

Participants initiated the PCS strategy with the creation of an organization wide shared definition of CS, which usually include a strategy that (a) incorporates a social aspect to staff engagement with executive management systemic support, (b) an appreciation, respect, and perpetual consideration for all planetary systemic health including all fauna and flora, and (c) in a capitalist societal structure, such as the United States, a processes specific PCS measurement system that justifies the CS strategy with the intent to create long-term CA.

The CI CS manager and staff starting point for the definition must indicate the needs of the individuals to generate their personal wellbeing (Sev, 2009). Creating and developing a successful CI PCS business model relies on the ability of managers to monitor, evaluate and establish a learning organization, defined as the incoming intellectual capabilities of the company, and outlines the new directions for company development and growth (Marchichova, 2019). The CI CS managers' capability to nurture wellbeing relies on their personal and public wealth (Sev, 2009). Homes, appliances, clothes, and electronics are personally owned assets, while roads, public buildings, and airports are publicly owned assets (Sev, 2009). Therefore, personal ownership is not a crucial part of one's systemic wellbeing; however, the wellbeing of society is crucial for CS (Sev, 2009). CI CS managers must constantly identify the changes in the environment, analyze the possible alternatives for development and develop complementary strategies (within conventional ones) to adapt to the changes (Marchichova, 2019) successfully.

CI CS managers have processes to measure outcomes and gather data, interpret, understand, and transform it into actual knowledge, implement to instill behavioral and cognitive changes (Teravainen & Junnonen, 2019). Managers recognize the importance of formulating a PCS strategy but need help in execution of the systemic concepts (Lloret, 2016). PCS strategies and processes benefit from applying systems thinking, using multiple viewpoints that contribute to a greater understanding of the system's behavior (Moldavaska & Welo, 2015). PCS strategies require participants to understand systems, those with the ability are known as systems thinkers (ST), which participants referred to as sustainability champions.

The participant's examples demonstrated their understanding of ST through CI examples that lend support for themselves being sustainability champions and for a business model that encourages ST of all

members of the organization. There is a strong need for a shared understanding of CS's inherent interconnectedness and complexity, with the development of a common system language for harmonizing various tools, methods, and disciplines within the organization (Onat et al., 2017). Participants' examples demonstrated that systems thinkers are usually more apt to understand the systemic concepts needed for PCS practices initially. However, participants did not indicate how to identify a systems thinker.

Participants indicated that early buy-in occurs with systems thinkers who are usually open-minded to learning and incorporating sustainability practices. Individual employee readiness is the crucial element upon which the change implementation success or failure depends. All observed elements need to be coordinated and incorporated in the system to maximize value for the construction company and customer (Milovanovic & Cvjetkovic, 2021). Analyzing the various benefits, challenges and opportunities of CS helps to create a bold vision that demonstrates it is possible to address PCS practices in a spirit corresponding with the times, characterized by demand for quality products and services generated efficiently and in compliance with national and international standards of environmental protection and respect for workers' rights while maintaining adequate profit margins to remain in the market (Armando et al., 2021).

APPLICATIONS TO PROFESSIONAL PRACTICE

CI managers are under major pressure to utilize a PCS business model, save resources and minimize the construction activities that could negatively impact the environment (Shurrab et al., 2018). Currently, the CI generates negative impacts related to raw material extraction, material manufacturing, infrastructure construction, operation and demolition (Giannoni et al., 2017). CI's negative impacts are the consumption of non-renewable resources, the decline of biological diversity, the destruction of forest zones, the loss of agricultural areas, the destruction of natural spaces, global warming, and water, air and soil contamination (Giannoni et al., 2017). To mitigate the current situation, CI managers can promote sustainable development that eliminates or mitigates these negative impacts (Giannoni et al., 2017). CS is profitable, socially responsible, and does not deplete the use of the planet's resources (Burkynskyi et al., 2021). The knowledge of PCS strategies applied in the CI will clarify sustainability concepts, enable sustainable design strategies, and facilitate the fulfillment of the proposed objectives through a systemic application (Giannoni et al., 2017).

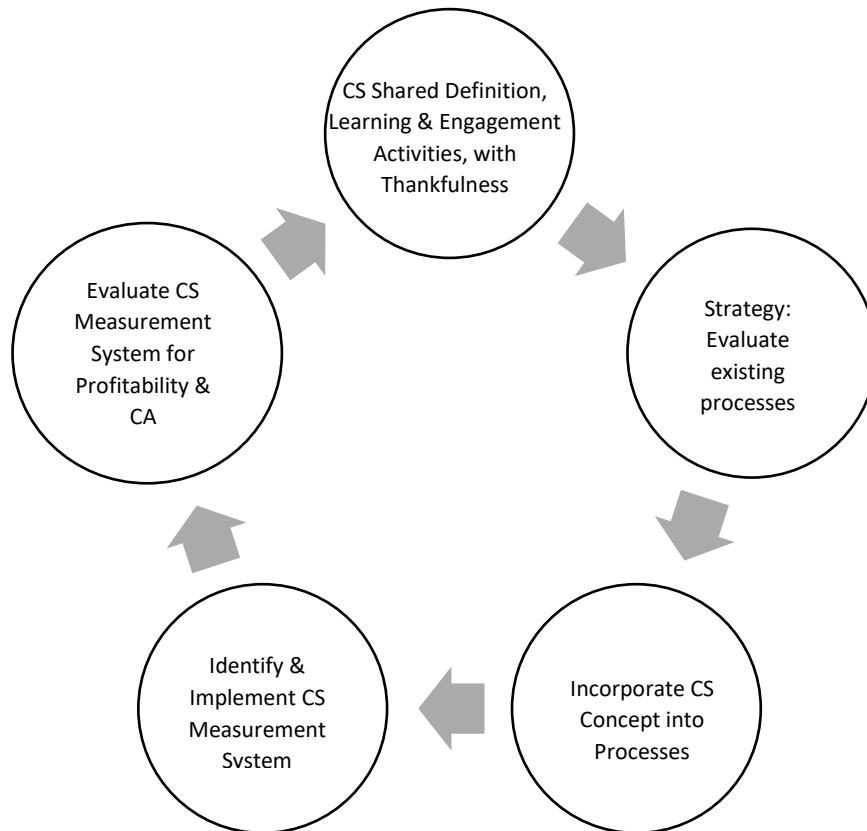
The conceptual framework is the general systems theory developed by von Bertalanffy (1968) who stated an organism, such as the managers of an organization, measure the effectiveness of the inputs, processes, outputs, feedback and subsystems through structured models, principles, and laws, which then apply to all their usable generalized systems. All participants mentioned the concept of systems, the need for corporate staff's inclusive understanding of systems, and the ability to modify processes of the system for profitability. A CI PCS business model is a conceptual framework that helps to relate a company strategy with its activities and processes to the strategy implementation (Marchichova, 2019). The use of the general system theory for this study aided in the generalization of the systemic CI CS strategies and processes, which led to the creation of the Czelusniak-Serviss Profitable Corporate Sustainability Business Model (Czelusniak-Serviss PCSBM).

Czelusniak-Serviss Profitable Corporate Sustainability Business Model

Sustainability champions establish a learning organization with engagement activities, expressions of thankfulness, community stewardship, and a measurement system for CA. The type and purpose of CS learning and engagement activities are left unidentified to enable each team to develop a shared vision for the organization perpetually. Managers provide learning and engagement activities to establish a learning organization where employees develop systems thinking skills, are committed to and the share development of the organizational vision and mission statement and participate in community stewardship with transparent personal and systemic accountability.

The application to professional practice is for managers' implementation and perpetual use of the Czelusniak-Serviss PCSBM. Figure 1 shows the Czelusniak-Serviss PCSBM.

FIGURE 1
CZELUSNIAK-SERVISS PROFITABLE CORPORATE SUSTAINABILITY BUSINESS MODEL



The achievement of a successful PCS business model incorporation and buy-in requires managers use of an improved business decision-making model that simultaneously increases revenues and revises the supply chain for meeting the principles in the sphere of human rights, economic growth, satisfactory working conditions, and the environment, and combating corruption as the key driver of CS business models (Burkynskyi et al., 2021). A PCS business model strategy requires perpetual mission reformulation, strategy redefinition and involves managers' broader thinking, leaders capable of open mindedness, and creativity (Kroupová, 2015). The Czelusniak-Serviss PCSBM initiated with the identification of a need or desire for PCS strategies and processes, which is immediately followed by the development of a shared organizational definition of CS. The developed shared definition of CS is then shared with all stakeholders to instill a sense of accountability and transparency. The CS definition development, learning and engagement activities, and other like processes are not identified specifically here due to the expectation of inherent flexibility.

Managers evaluate existing processes for efficiency and further how to incorporate a CS strategy into those processes or create new processes. To evaluate the existing process, managers meet with the employee(s) performing the task/process. The manager, and employee(s) evaluate how to incorporate the organizational shared CS strategy into the task/process. After consideration of employees' ideas, managers research similar CS processes in related industries. Managers then design a corporate-wide CS standard for the task/process. Once the CS task/process is decided upon, review with the employee(s) responsible for the task/process and obtain agreement. Implement new or modified tasks/processes with the CS strategy.

The use of sustainability measurement systems directs managers to incorporate systems thinking ideas into sustainability assessment and to identify actions towards PCS practice (Moldavaska & Welo, 2015). Managers research industry wide existing CS measurement systems and the incorporation of CS into the

organizational culture. The type and purpose of CS measurement systems are purposefully left unidentified to enable each team to perpetually develop a shared vision of PCS measurement systems for the organization. After organizational-wide review and consideration, managers select a PCS measurement system, then either implement a predetermined measurement system as designed or in an ad hoc fashion. Link new tasks/processes to the employee's job description responsibilities for systemic accountability, transparency and compensate for added workload and responsibility. As tasks/processes with measurement systems become a routine strategy and process, managers use the measurement system to evaluate for CA. By scheduling process reviews, managers can introduce or re-introduce the shared organizational definition of CS to existing or new employees while providing an opportunity further to develop CS practices through learning and engagement activities.

Learning Activities

Managers utilize experiential or transformational leadership styles to develop PCS strategies and processes competence, which involves both cognitive and practical development in the ability to deal with increasing complexity and learning of values and ongoing reflection of the CS practices (Haney et al., 2020). Marsh et al. (2022) administered a structured questionnaire survey completed by 108 CI professionals who indicated an initial need for managers to improve the capability, opportunity, and motivation of employees' buy-in to PCS strategies, to facilitate the adoption of CI PCS practices.

Applying PCS in construction encounters many problems during the implementation process; the main problem is the construction workforce's weak awareness of CS in construction (Shurrab et al., 2018). Knowledge about sustainability and the environment is vital for adopting sustainable behaviors if customers are aware of environmental problems (Shurrab et al., 2018). Teams develop a shared understanding of knowledge management and how it is an essential strategy for improving organizational competitiveness, with the organizational culture a crucial factor in determining the initiative's success or failure (Mojibi et al., 2015). P5 stated that CI managers educate their teams on the importance of CI PCS strategies and processes, meanwhile, showing the systemic impact on the team, project, profitability, and community to inspire, encourage, and nurture.

Engagement Activities

The role of leadership is to ensure the engagement of every employee, stakeholder, shareholder and customer (Gold & Garad, 2019). Participants indicated that CI managers support CS and incorporate an inclusive community-based perspective through engagement activities. P7 stated that to implement CS strategies and processes is to form relationships because then everyone is part of the grand scheme of things, we're all working towards the same goal. P7's statement implies that relationships in the CI are important because for example, when a CI team is standing on rafters to complete constructing a roof, they must trust each other is informed, and will be considerate of others on the construction site. The social aspect of the working relationship through participation in activities strengthens the trust between participants and further strengthens the trust on the work site. Participants shared that informed, inclusive CI cultures volunteer together to a social activity, which allows performing a different task than customarily performed together. Participation in the social activity is an attempt to remove potential stressful social anxieties, with the intent to share enjoyable moments and further encourage open communication.

Expressions of Thankfulness

As a gesture of appreciation, CI managers provide acts of thankfulness such as paid time off to attend the shared activity, which encourages the employees to promote the organization. P8 stated that a great motivator is CI managers expressing interest in what matters to the CI employees. CI managers, P8 stated, engage with CI employees in a way to be aware of what motivates and drives, to know why they care, and celebrate with an expression of thankfulness, historically referred to as a benefit (perk), such as a celebration or paid time off. Although these activities have no direct profitability, the participants shared that the CI managers know that it does. Lastly, P5 stated that for a perk, consider how many hours volunteered, so leave early on Friday.

PCS innovation is a driver for CI managers to achieve long-term CA. There is a positive stock market reaction to incremental sustainability innovation announcements in the CI (Duong et al., 2021), demonstrating the potential for profitability. P3 stated that everybody's job is in some fashion aligned to the company's economic sustainability, with the hopes that it will ensure the company can continue to function. Participants stated that once the PCS strategy has complete buy-in from all management and staff, there is no longer a need to measure profitability; however, the CI managers still measure profitability.

The Czelusniak-Serviss PCSBM is designed to repeat, as the industry changes with new developments and trends, managers identify new needs and consider incorporating them into the current PCS strategies and processes. When onboarding new staff, managers inform of the Czelusniak-Serviss PCSBM while explaining how and why to motivate buy-in.

Recommendations for Action: Implement Now or Comply Eventually

The expectation of government regulations, community relationships, cost and revenue imperatives, and societal and moral obligations are the four main reasons why CS demands urgent attention (Buhovac, 2014). The first recommendation for action is that CI managers implement the Czelusniak-Serviss PCSBM in preparation for future governmental regulations. Strategic and financial motivations for CS are emphasized for the food, construction, and other industries, however, the CI managers are strongly motivated by regulatory compliance (Paletta et al., 2021). Recently, the government issued green construction-related laws and standards, which protect the environment, further save water and energy (Shurrab et al., 2018). P6, P7, and P8 mentioned potential future governmental regulations such as carbon taxes or having to provide documented proof of the organizational practices for carbon neutrality. P4 stated that managers need to be the drivers and create change without the need for government regulations. It really takes good strong corporate culture and sustainability champions to say we are going above and beyond compliance because it is good business and the right thing to do.

At the time of writing this study, stalled in the New York Senate, is the Fashion Sustainability and Social Accountability Act. If the Fashion Act (FA) passes, it will make New York the first state in the United States and the world to pass legislation that would effectively hold the biggest brands in fashion to account for their role in climate change (NYSenate, 2022). The measurement system under this legislation would require FI companies to pay great attention to the CI-built environment that supports garment-making (Morrison, 2022). In addition, the FA would impact the CI through direct requirement to disclose the impacts of greenhouse gas emissions, water footprints and chemical use throughout the supply chain (Morrison, 2022).

The FA would require fashion industry (FI) companies to map a minimum of 50 percent of their supply chain, starting with the farms where the raw materials originate through factories and shipping, with all CS information available online for stakeholders to view (NYSenate, 2022). The FA has factors that will likely disseminate throughout other industries due to proximity and dependence, which includes the CI (Morrison, 2022). Similar legislation is debated in the European Union, and while Germany, France, Britain and Australia have existing laws regarding human rights and slavery, there is no general legislation in any country governing the greater social and environmental actions of the fashion industry and mandating change (Morrison, 2022). If the FA does not pass in the New York State Senate, the act still came under consideration, which means it is only a matter of time before a governmental agency implements systemic level CS expectations and publicize them for a level of transparency and accountability.

CONCLUSION

For CS strategies and processes to work, Evans et al. (2017) argued the need for balancing the ecological, social and economic sustainability aspects that must be viable and healthy if the planet system is to flourish. Evans et al. (2017) proposed equilibrium achievement; however, the task is a formidable undertaking for managers, staff, and society at large. If a firm's focus remains on economic value, any solutions adopted are insufficient and vulnerable to conflicts (Evans et al., 2017). If the value created in firms is of several types, however, Evans et al. (2017) stated that it is possible to find better ways to create

economic and non-economic value sustainably, so that all stakeholders who help to create the value also share the systemic benefits. Socially conscious organizations have mutual recognition and acceptance of others, including customers and other stakeholders, as responsible parties (Evans et al., 2017). The need for managers to realize an integrated and balanced system, deliberate interaction, partnering, networking, and learning from multiple and diverse stakeholders is critical (Evans et al., 2017). The mutual value creation in CS strategies and processes requires systemic consideration.

The current market for PCS through products and services is over \$290 billion, and socially responsible investments grew to \$3 trillion in assets just in the USA (Alberti & Varon Garrido, 2017). Executives and managers recognize opportunities for improved performance and CA as they design new or modify existing business models, products, and services to address CS challenges (Alberti & Varon Garrido, 2017). For a CSPMSI business model, one approach is to treat CS goals as a trade-off and choose between profit and societal impact, looking at societal demands (Alberti & Varon Garrido, 2017). Another approach, from Alberti, and Varon Garrido (2017), is to incorporate societal demands to rethink firms' business model so that trade-offs can potentially become new business strategies. For a PCS framework, Baral and Pokharel (2017) maintained that managers must generate a profit for the organization to exist, however, the organization's long-term existence may not endure by profits alone. Baral, and Pokharel (2017) argued that external stakeholders and customers evaluate favorably and show loyalty toward companies and their products when companies show their commitment to CS through significant environmental initiatives and stewardship. Employees prefer to work not just for money but also for meaning and satisfaction, which can come from creating higher-level values rather than pursuing economic value only (Baral & Pokharel, 2017). For stewardship to work, the initial creation of a mission statement in terms of economic, social, and environmental outcomes enables managers to apply CS strategies and processes.

S&P 500 companies have mission, vision, and value statements, and Baral and Polharel (2017) analyzed the extent to which they each reflect the systemic concept of CS. From April to June 2013, Baral, and Pokharel (2017) collected data from public domains. After using inductive methods, they concluded that managers reach CS goals only when they are not solely trying to generate profit but also show care for people and the planet. The theme generating profit emerged in 69.2% of the companies, while other themes of caring for the people and safeguarding the planet appeared respectively in 34.0% and 14.8% of the companies (Baral & Pokharel, 2017). Unfortunately, Baral and Pokharel (2017) found that only 12.0% of the managers had the triple bottom line themes in their strategies and processes. The balance between the three dimensions is desirable, but what balance means is contentious, so creating and implementing a CS societal shared vision is in need.

Business executives reported that sustainability benefits accrue not only to the environment and society but also to the companies themselves (Dyllick & Muff, 2016). Business executives, the staff, and the organization achieve benefits from sustainability practices through reducing costs and the risks of doing business (Dyllick & Muff, 2016). The intangible benefits of sustainable business strategies and processes come in the form of increased brand reputation, increased organizational attractiveness to available talent, and increased competitiveness (Dyllick & Muff, 2016). Organizational leaders could train managers in PCS strategies and processes. With managers trained in similar profitable and sustainable business strategies and process improvement techniques, they could in-turn train their employees in PCS strategies and processes to achieve profitable competitive and sustained advantages.

The CI generates about one-third of all waste, half of all extracted materials and consumed energy, a third of all water consumption, and is one of the most significant economic market segments worldwide (Sfakianaki, 2015). Implementing PCS strategies and processes in the CI makes it possible to contribute to the sustainable development of society and companies (Giannoni et al., 2017). The addition of the findings of this research and the Czelusniak-Serviss PCSBM in the CI may lead to several benefits: (1) environmentally, reductions of non-renewable resources, waste and pollution, and increase the reuse and recycling of CI building materials, (2) socially, consideration of stakeholders' requirements and ensure that the project fulfills their needs and expectations, and (3) economically, supports growth in the CI through PCS strategies and processes, and provides more job opportunities.

The CI's must consider that a new generation of consumers is concerned with CS issues and requires CI managers to produce sustainable building materials (Simion et al., 2019) to stay competitive (Liu et al., 2020). Only 20% of companies report integrating CS strategies and processes, while 60% of managers believe that PCS strategies and processes affect decisions that lead to CA (Aragon-Correa et al., 2017). The business problem was that some managers in the CI lacked PCS strategies and processes to achieve CA. With the Czelusniak-Serviss Profitable Corporate Sustainability Business Model used as a guideline, CI managers, and potentially other similar type industries managers, can enhance their strategies and processes for a profitable corporate sustainability competitive advantage.

ACKNOWLEDGEMENTS

Dr. Dina Samora, my first chair committee member, with a generous amount of supportive nudging and flexibility to make me feel like I could achieve my goal. Dr. Peter Anthony, my second chair, the figure needed to drive me to work harder. Thank you both so much for the years you walked with me along this journey, and for reviewing this article, forever grateful. The two URR members; Dr. de Souza and Dr. Dooley, pushed me to realize the importance of my word, thank you. For the Muskegon, Michigan Rescue Mission, for taking in my mother and I one summer so we may have shelter and food, and to Eddie Cooley for providing mentorship to a kid during a scary time. This research and article are dedicated to those who need sustainable housing throughout the world. Be a sustainability champion.

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