An SDG-based tool for corporate governance: managing sustainability pressures in the steel industry[1][2]

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Abstract

***Frame of the research**: This study is positioned within the governance and sustainability debate, and uses an integrated perspective drawing on institutional theory to explore how firms respond to institutional pressures.*

***Purpose of the paper**: The paper aims to identify a process capable of managing sustainability pressures and supporting long-term strategic decision-making.*

***Methodology**: The study employs a constructive research approach, a form of interventionist research intended to develop new management tools or solutions for real-world organisational challenges. The approach was applied in a large Italian steel company, allowing for the practical testing and refinement of the proposed tool within a complex industrial environment.*

***Results**: The paper proposes, refines, and tests an SDG-based assessment tool that enables the benchmarked evaluation of sustainability performance and highlights opportunities for managerial innovation, thereby guiding future decision-making and initiatives.*

***Research limitations:** Despite its significant contributions, the study has some limitations, particularly concerning the need for cross-sector validation and longitudinal assessment.*

***Practical implications:** The study offers practical and managerial insights by providing a process that supports corporate governance through the making of more informed and targeted strategic decisions. These decisions are aligned with the priority pressures that must be addressed by the firm, thereby ensuring legitimacy and operational continuity.*

***Originality of the study**: Drawing inspiration from the 17 SDGs, the study presents a tool that, when embedded within a broader process, can manage sustainability-related pressures and interpret the actions required within a sustainability strategy. This approach enables the complexity and intrinsic value of the social, economic, and environmental dimensions to be considered.*

Keywords: *institutional complexity; sustainability; interventionist research; steel industry; 2030 Agenda*

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1. Introduction

Increasing pressures and intensifying competition complicate the institutional environment for organisations (Hoffman, 1999). These dynamics, combined with growing concerns about resource overconsumption, environmental degradation, and social inequality, underscore the need for a transition towards a more sustainable society and economy (Adams *et al.*, 2016). Within this evolving institutional context, firms are increasingly expected to integrate environmental and social sustainability into their strategic orientations and corporate governance systems, alongside traditional economic objectives (Annesi *et al.*, 2025; Mason and Doherty, 2016). The literature emphasises that tensions between economic, social, and environmental objectives are intrinsic to business activity and are not easily resolved (Hahn *et al.*, 2015; 2018). Such tensions arise, for example, between competitive and sustainability strategies (Hengst *et al.*, 2020) and between organisational growth and long-term sustainability (Tregidga *et al.*, 2018).

Boards of directors (BODs) face complex sets of pressures. Externally, they are subject to institutional demands from regulators, ESG-oriented investors, stakeholders, and global governance frameworks such as the Sustainable Development Goals (SDGs) (UN, 2015). Internally, they must navigate competing interpretations of organisational purpose and divergent assessments of the strategic relevance of sustainability, which can generate tensions in strategic decision-making (Annesi *et al.*, 2025). As the central body for corporate governance, the board directs the adoption and implementation of sustainability strategies, guiding decision-making towards responsible and long-term approaches (Aguilera *et al.*, 2021).

Recent studies indicate that these pressures significantly shape corporate strategies. Tapaninaho (2025) demonstrates that CEOs' discourses oscillate between instrumental, normative, and transformative approaches to sustainability, reflecting the complexity of the demands faced by firms. Similarly, Annesi *et al.* (2025) and Mason and Doherty (2016) show that governance practices do not eliminate the paradoxes between business and sustainability but instead are intended to manage and mitigate them through specific structures and strategic decision-making at board level. However, BODs often face challenges in embedding sustainability goals into their corporate strategies (Carmine and De Marchi, 2023). These challenges are driven by regulatory changes, stakeholder pressures (Fernandez-Feijoo *et al.*, 2014), and the need to balance sustainability with efficiency and competitiveness (Du *et al.*, 2012). Key difficulties include conflicts between stakeholders' expectations, trade-offs between short- and long-term objectives, a lack of standardised measurement tools, and internal misalignment. Additionally, consumer and employee pressures strengthen sustainability demands (Cremers, 2015), while digital transformation adds both opportunities and complexity in aligning sustainability goals with technological innovation (Guandalini, 2022). Consequently, companies must navigate a complex array of competing pressures, which renders their business operations increasingly intricate and multifaceted. It is therefore crucial to address these challenges by

critically examining and resolving the gaps, contradictions, and tensions that characterise corporate governance practices throughout the process of the integration of sustainability goals. In this context, the United Nations 2030 Agenda constitutes an institutional framework of goals (Fu *et al.*, 2019; García-Sánchez *et al.*, 2020; Hepp *et al.*, 2019) that enables corporate actions to be assessed in terms of their contribution to sustainability (e.g. Battaglia *et al.*, 2020; Di Vaio and Varriale, 2020; GRI, 2020; Schipper *et al.*, 2021).

Although a growing body of literature has examined the integration of the SDGs into corporate practices and strategies (e.g. Khan *et al.*, 2024; Kubiszewski *et al.*, 2022; Vildåsen, 2018), recognising them as a key lever for embedding sustainability priorities into business models and operations (Macellari *et al.*, 2018), the empirical literature remains very fragmented (Urbieta, 2024). In particular, existing studies predominantly focus on the monitoring of sustainability performance and on communication initiatives that address only a limited number of goals, thereby lacking a holistic and coherent approach that is fully aligned with the 2030 Agenda (Andreotti *et al.*, 2023; Hatayama, 2022). For instance, research in the steel industry shows that firms tend to prioritise only specific SDGs, such as SDG 12 (responsible consumption and production), SDG 13 (climate action), and SDG 7 (affordable and clean energy), while paying less attention to other goals (Fărcean *et al.*, 2023). Despite the availability of tools and indicators, significant gaps remain in the literature regarding comprehensive and integrated approaches that are capable of considering all the SDGs simultaneously (Hatayama, 2022). This highlights the need for a more coherent theoretical framework that can link organisational commitment to the SDGs as well as to consistent and coordinated strategic engagement (Vildåsen, 2018; Vincenzi *et al.*, 2025), in order to respond effectively to institutional pressures.

Building on these considerations, this research seeks to address the following question:

How can governance systems effectively manage institutional pressures to integrate sustainability objectives into corporate strategies in a comprehensive way?

This paper proposes a process that can be implemented by a governance team, using an innovative tool, to assess the firm's sustainability maturity across the full set of SDGs while also identifying and prioritising institutional pressures to enable an integrated response. Addressing these gaps enables governance leaders to respond to internal and external sustainability pressures in a coordinated and strategic manner, avoiding fragmented or misaligned approaches that may result in inefficiencies, missed opportunities, and duplicated efforts (Annesi *et al.*, 2025). In this context, it is essential to adopt a sustainability approach that recognises and manages the interconnections between the environmental, social, and economic dimensions of the organisation (Carmine and De Marchi, 2023). Such an approach must extend beyond isolated initiatives, promoting integrated and coherent governance strategies (Annesi *et al.*, 2025; Tapaninaho, 2025).

Institutional theory plays a pivotal role in guiding firms in the analysis of their organisational responses to sustainability-related institutional pressures, as it explains how coercive, normative, and cultural-cognitive forces influence corporate behaviour and decision-making processes. In this perspective, institutional theory serves as the primary framework for understanding how corporate governance practice can manage sustainability-related pressures within corporate strategies (Annesi *et al.*, 2025; Bhuiyan *et al.*, 2023; Li *et al.*, 2021; Tunji-Olayeni *et al.*, 2025). In this research, the alignment between a company's objectives and the international sustainability priorities, as well as coherence among its board members in decision-making, is examined through a process in which the SDGs are used as a valuable guide to inform the company's understanding of its impact.

From an operational perspective, the process and the tool for addressing this concrete need within a company are developed in this paper; they are designed to support those responsible for governance in managing the institutional pressures related to sustainability. The study follows a constructive research approach (Jönsson and Lukka, 2007). The tool was developed through discussions with management and governance representatives on sustainability issues to assess organisational performance and management practices.

The results generated by the tool highlight the areas most critically related to sustainability, namely those with the lowest scores. When compared with the pressures considered most significant for the company, these findings enable the identification of priority actions required to respond effectively to different pressures. The definition of these priority actions is undertaken at the board and top management level, whereas their execution is delegated to operational units. In the final step, based on the results emerging from the application of the SDG-based tool, a sustainability strategy is defined. This perspective supports the simultaneous management of actions that may even be conflicting, fostering governance that is more effective, adaptive, and responsive to market, regulatory, and socio-cultural sustainability demands, and thereby strengthening, in coherence with the institutional perspective, corporate legitimacy (Boiral *et al.*, 2018).

2. Theoretical framework: Institutional theory

Companies face multiple institutional pressures arising from socio-cultural norms, regulatory frameworks, market demands, and stakeholder expectations, and these often conflict with one another (Greenwood *et al.*, 2011). Within this setting, institutional theory argues that organisations tend to conform to institutional pressures in order to gain legitimacy, secure access to critical resources, and ensure long-term survival (Meyer and Rowan, 1977; Scott, 1995). Organisations are therefore continuously shaped both by external forces-such as regulations, professional standards, and societal expectations (Zucker, 1987)-and by internal dynamics related to governance structures, organisational culture, and economic objectives.

Managing these pressures requires firms to reconcile economic imperatives with socio-environmental expectations, and it is often difficult to integrate these within a single coherent strategy (Greenwood *et al.*, 2011; Meyer and Rowan, 1977). The ability to balance these dimensions is crucial for strengthening organisational legitimacy, maintaining stakeholder support, and enhancing long-term continuity prospects (Oliver, 1997; Yang and Konrad, 2010). From this perspective, institutional theory examines how organisations respond to competing demands and institutional expectations, highlighting both the tendency towards convergence around similar organisational forms and the emergence of differentiated strategic responses depending on contextual conditions (DiMaggio and Powell, 1991).

Early theoretical contributions primarily focused on how organisations respond to institutional expectations and regulatory constraints (Selznick, 1949, 1957). Subsequently, neo-institutionalism broadened this perspective by incorporating cultural, social, and cognitive dimensions that shape organisational behaviour (Scott, 2013). In particular, the theory emphasises that organisations do not merely comply with formal rules but progressively internalise practices, routines, and interpretative schemes that are regarded as legitimate within their institutional environment (Miles, 2012). According to DiMaggio and Powell (1983), organisations are subject to three main types of institutional pressure-coercive, normative, and cultural-cognitive-which shape their strategies, structures, and behaviours.

The coercive pillar is grounded in laws, regulations, and institutional control mechanisms that shape organisational behaviour through formal obligations, standards, monitoring systems, and potential sanctions (Scott, 2005). Such pressures lead firms to comply with regulatory frameworks in order to maintain legitimacy and avoid penalties (DiMaggio and Powell, 1983; Scott, 2013). The normative pillar refers to shared values, professional standards, and social expectations that define what is considered appropriate and legitimate within a given institutional context (Scott, 1995). Normative pressures operate through processes of internalisation, whereby organisations adopt practices consistent with socially recognised principles and codes of conduct (Scott, 2005). In this sense, conformity arises not only from external constraints but also from voluntary adherence to socially endorsed values that are perceived as legitimate and desirable. The cultural-cognitive pillar encompasses shared beliefs, interpretative schemes, and mental models that shape how organisational actors interpret reality and attribute meaning to their actions (Scott, 2013). These deeply embedded and often taken-for-granted frameworks guide decision-making processes and define what is perceived as appropriate within a given institutional setting (DiMaggio and Powell, 1983).

In the context of corporate sustainability, institutional theory provides a particularly valuable analytical lens for understanding how institutional pressures influence firms' strategic decisions (Bansal, 2005; Delmas and Toffel, 2008; Hahn *et al.*, 2010). Organisations are increasingly confronted with complex and multifaceted demands from governments, investors, customers, local communities, and civil society, and these demands are often characterised by divergent objectives. For instance, environmental

regulations may require substantial investment in decarbonisation technologies, thereby creating tensions between short-term economic objectives and long-term socio-environmental goals (Bansal and Hoffman, 2012). At the same time, growing stakeholder attention to firms' environmental and social impacts encourages managers to integrate sustainability into the corporate strategy in order to preserve legitimacy, reputation, and institutional support (Hahn *et al.*, 2015).

Against this backdrop, the present study adopts institutional theory as its overarching theoretical framework for analysing the process of developing the proposed tool. In particular, the tool is designed to support organisations in identifying and managing sustainability-related institutional pressures, with the 2030 Agenda and the SDGs serving as key institutional reference points guiding firms' strategic and operational actions.

3. Research method

The research adopts a constructive and action-oriented approach, as the project aimed not only to understand the sustainability challenges faced by an Italian company that had requested the support of the two researchers, but also to actively co-create a solution. Constructive research represents a form of interventionist inquiry aimed at developing new management tools or solutions to address real-world organisational problems (Jönsson and Lukka, 2007), thereby ensuring the practical applicability of the designed process within a corporate context (Morse *et al.*, 2002). When following this approach, scholars draw upon their theoretical expertise to conceptualise solutions, while engaging in a collaborative process to develop outcomes that are both practically relevant and theoretically robust (Kasanen *et al.*, 1993).

The project was developed and tested within a medium-to-large, well-structured steel company (hereafter COMPANY). The company forms part of a multinational steel group with extensive international commercial relationships across the supply chain, enhancing the value of its products throughout the production network. Within COMPANY, the chief executive officer (CEO) serves as the general director, and is appointed by the BOD as the principal representative for the company's strategic governance. In this capacity, the CEO is responsible, within the strategic framework defined by the BOD, for translating BOD directives into actionable strategies and coordinating with managers to ensure their effective implementation.

COMPANY was facing some problems linked to sustainability and innovation (as described below), and explicitly requested academic support to address them. COMPANY emerged as a suitable context for an interventionist research design whose aim was not only to analyse the phenomenon but also actively to develop and test a tool for the concrete support of the decision-making process at the board and top management level, thereby combining practical relevance with a theoretical contribution.

By applying the principles of action research (Eden and Huxham, 1996; Greenwood and Levin, 2007), the project combined rigorous analysis with direct intervention: the development of a tool served a dual purpose, being both a method to structure knowledge and an operational instrument to address issues. The constructive research process involved seven overlapping phases, which can be grouped into three main stages (preparatory, fieldwork, and analysis), as illustrated in Table 1 (Battaglia *et al.*, 2014; Labro and Tuomela, 2003).

Tab. 1: Phases of the constructive research process

1. Preparatory phase	I. Identifying a practical and relevant research problem
	II. Examining the potential for long-term cooperation
	III. Attaining a deep understanding of the topic
2. Fieldwork phase	IV. Creating a novel construct
	V. Implementing and testing the model
3. Analysis phase	VI. Analysing the scope of the applicability of the solution
	VII. Demonstrating the research contributions

Source: Authors' elaboration

The researchers involved in the project are two scholars specialising in corporate sustainability. Their role aligned with an interventionist and constructive research design, going beyond mere observation and data collection. Specifically, they acted as co-designers of the bespoke assessment tool intended to support business decision-making, contributing theoretical knowledge, structuring the analytical framework, and guiding iterative cycles of action and reflection alongside the organisational actors. This approach is aligned with the literature that emphasises how direct academic engagement in practice can enhance both the practical relevance and the theoretical contribution of research (Slater *et al.*, 2026).

As part of the research process, the team conducted meetings with a governance representative (the CEO), a member of the BOD, other members of the management committee, including the HR manager, the production director, and the IT and technical services manager, and top managers possessing expertise relevant to the study's objectives (the environmental manager, the energy manager, the health and safety manager, and the sales manager). The team also carried out an in-depth analysis of company documents, such as the environmental statement in compliance with ISO 14001 and Eco-Management and Audit Scheme (EMAS), and the quality, health, safety and environment (QHSE) policy, among others. These activities enabled the development of a detailed and accurate company profile, grounded in factual organisational information.

4. Phases of field study

We follow the phases outlined by the constructive research procedure, examining each of the three macro steps with specific insights.

4.1 The Preparatory Phase

This phase involved the identification of a relevant practical research problem, the assessment of the feasibility of long-term collaboration with the partner organisation, and the development of a deep and structured understanding of the research context through both theoretical and empirical analysis.

I) Identifying a practical and relevant research problem

The study originated in September 2022 in discussions with COMPANY's leadership, who sought university support to design a sustainability project aimed at improving resource efficiency, operational performance, and workforce productivity.

The project kick-off meeting was attended, on COMPANY's side, by the CEO (acting as project coordinator), a member of the BOD (serving as project sponsor), and other members of the management committee, including the HR manager, the production director, and the IT and technical services manager. The CEO and the project sponsor were representatives of the BOD. The CEO emphasised COMPANY's longstanding commitment to environmental issues. Notably, recent investments had included the replacement of the sludge drying system with a filter press to reduce dust emissions, and the installation in 2019 of a desalination plant which allows the use of seawater and reduces groundwater extraction.

In terms of management practices, COMPANY has a strong tradition of sustainability, reflected in its ISO 14001, ISO 45001, and EMAS certifications (Naidu, 2020). However, energy costs surged in 2022, resulting in intermittent shutdowns and fluctuations in production. Furthermore, the parent group set a target of net-zero CO_2 emissions by 2030, representing a binding and high-priority coercive pressure that had to be addressed by the company.

Beyond the competitive sphere, increasingly stringent normative changes in European markets were posing organisational challenges. The administrative director highlighted impending regulations such as the Corporate Sustainability Reporting Directive (CSRD, Directive 2022/2464/EU[3]). This Directive mandates medium-sized and large companies to report social and environmental risks and their annual impact on people and the environment (European Commission, 2023) by, for example, disclosing greenhouse gas emissions, energy consumption, water usage, waste management practices, employee health and safety metrics, diversity and inclusion initiatives, and impacts on local communities. COMPANY needed assistance in identifying relevant sustainability areas and devising a method for measuring and accounting for its impacts, risks, and opportunities amidst the evolving regulatory landscape.

The CEO and HR manager emphasised the importance of improving staff productivity, reducing absenteeism, and enhancing health and safety, particularly in the post-COVID context, while also responding to evolving employee expectations and corporate performance targets.

[3] It was only with the 2025 Omnibus package that the Directive's initial reporting requirements were streamlined and the relevant deadlines extended.

Additionally, all the managers highlighted the need to strengthen relationships with local communities to support responsible and transparent corporate conduct (Waddock *et al.*, 2002). Although COMPANY had historically maintained collaborative stakeholder relationships, recent pandemic and industry-related crises had placed considerable strain on its engagement activities, thereby weakening the company's traditionally prominent role as a key contributor to local development.

The needs were interpreted as institutional pressures to be managed and were mapped onto the three core pillars of the neo-institutional framework. Coercive pressures stemmed from the necessity to increase production efficiency, promote sustainability-oriented innovation, and enhance competitive positioning in the market. Normative pressures arose from the European regulatory framework, while cultural-cognitive pressures reflected organisational responsibilities towards employees and local communities.

Within this perspective, the theoretical framework guided the development of the organisational support project, with the management of these institutional pressures deemed critical to maintaining social legitimacy, economic performance, and long-term organisational sustainability (Boiral *et al.*, 2018). In particular, the coexistence of the pressures stemming from different institutional pillars had generated overlapping and, in some cases, conflicting expectations, making it difficult to address them through isolated or sequential decision-making processes. This complexity was further exacerbated by there being limited financial and investment resources, as COMPANY faced significant budget constraints that restricted its ability to implement all the required sustainability initiatives simultaneously. For instance, complying with increasingly stringent regulatory requirements such as the CSRD, investing in decarbonisation technologies in response to the parent group's net-zero CO_2 target, and improving employee health and safety and community engagement practices were all competing for the same financial resources. At the same time, rising energy costs and production volatility reduced available margins, intensifying trade-offs between short-term operational stability and long-term sustainability investments. Given the potential tensions among these pressures, the adoption of an integrated approach to analysis and planning, capable of simultaneously addressing the full spectrum of sustainability-related institutional demands, was considered imperative.

II) Examining the potential for long-term cooperation

The project was structured over a ten-month period, which was considered sufficient both to conduct the research activities and to foster a constructive and collaborative relationship between COMPANY and the research team. It is noteworthy that one of the researchers had previously collaborated with COMPANY, which helped to ensure the alignment of the participants' values. COMPANY provided financial support to the research team, covering travel expenses and contributing to the research grant of the junior researcher. Furthermore, an informal agreement was reached allowing all the data collected to be used for research purposes,

while guaranteeing COMPANY's anonymity. Importantly, this phase also involved an assessment of COMPANY's willingness and ability to engage in sustained collaboration over time, which is a prerequisite for constructive research. This included evaluating the availability of key organisational actors to participate in iterative interactions, provide feedback, and support the progressive refinement and testing of the proposed tool.

Overall, the organisation demonstrated a strong commitment to long-term cooperation, ensuring the feasibility of continuous researcher-company interaction throughout the project and enabling the co-development of a practically relevant and theoretically grounded solution.

III) Attaining a deep understanding of the topic

The literature study presented in the previous paragraphs was supported by the use of the 2030 Agenda, selected by the researchers as the analytical framework for structuring and operationalising the interpretation of the phenomenon under investigation. In this sense, the SDGs were treated as a comprehensive framework and were used to map the full range of sustainability dimensions associated with institutional pressures.

The United Nations 2030 Agenda constitutes an institutional framework of goals (Fu *et al.*, 2019; García-Sánchez *et al.*, 2020; Hepp *et al.*, 2019) that enables the assessment of corporate actions in terms of their contribution to sustainability (e.g. Battaglia *et al.*, 2020; Schipper *et al.*, 2021). It represents a flexible international framework, not being strictly bound to specific sustainability reporting standards while remaining consistent with the main global reporting principles and systems. Moreover, the SDGs are increasingly institutionalised and embedded both in regulatory frameworks and in corporate practices, as well as in societal expectations.

The selection of the 2030 Agenda was motivated by its holistic nature (Battaglia *et al.*, 2020; Chalmers, 2019). It is widely recognised, and companies can contribute to its goals and targets at multiple levels through various organisational processes.

Within this study, the 2030 Agenda was used as an analytical device to ensure a comprehensive mapping of the sustainability dimensions associated with institutional pressures. This process enabled the systematic structuring of the various areas of sustainability, ensuring completeness and coherence in the interpretation of the phenomenon.

Building on this framework, the analytical questions were developed on the basis of the main theoretical contributions to sustainability (as reported in the Annex), with the aim of translating conceptual constructs into observable elements applicable to the organisational context.

The application of the tool subsequently made it possible to identify intervention priorities in relation to the objectives of the 2030 Agenda. In parallel, the insights emerging from the meetings with the corporate governance managers in the initial phase of the project, based on the main institutional pressures perceived by the organisation, enabled the development of a shared mapping of the actions to be prioritised over time with respect to the different dimensions of sustainability.

4.2 The Fieldwork Phase

Following the constructive research process, a solution grounded in the theory was constructed. This solution was then implemented and rigorously tested in practical settings.

IV) Creating a novel construct

The development of the tool required clear linkages to be established between the 17 SDGs and the pressures associated with environmental, social, and economic sustainability. To construct this conceptual framework, a detailed analysis of the relationships between the SDGs and their respective targets and indicators was first conducted.

A targeted review of the literature was undertaken to identify the most relevant themes associated with these targets and indicators, drawing on selected contributions based on both their recurrence in the literature and their operational relevance for firms. The references considered are reported in the Annex. This approach enabled the effective integration of the SDGs into the tool while maintaining usability for businesses and avoiding unnecessary complexity.

The managerial dimension refers to the methods employed to address specific sustainability challenges, which are essential for navigating evolving environments and mitigating potential negative impacts (Kure *et al.*, 2018). The way in which management practices influence outcomes and the reasons for the adoption of particular approaches being associated with improved business performance were also considered (Nawrocka and Parker, 2009).

The performance dimension captures the measurable results of these practices, with a focus on their contributions to the various global goals (Endrikat *et al.*, 2014).

Under the theme of 'People', policies, management practices, and performance indicators related to SDGs 1, 2, 3, 4, and 5 were examined. Initiatives to combat hunger and poverty, both independently and collaboratively with relevant third party entities, were investigated (Hasle and Vang, 2019; Simmons and Birchall, 2008), alongside policies fostering staff health and safety, training programmes (including global citizenship initiatives), and broader organisational well-being (Robone *et al.*, 2011). From a managerial perspective, non-discriminatory practices towards employees (including disadvantaged groups), gender gap reduction policies in hiring and career progression, and the adoption of standardised safety management tools and integrated approaches were explored (Kumar *et al.*, 2019). Performance measurement encompassed salary conditions, overtime frequency, and staff turnover rates, to assess workforce adequacy and compliance with contractual obligations. Gender-based salary disparities and the effectiveness of health and safety policies (measured via accident frequency/severity indices and occupational disease data) were also evaluated (Salguero-Caparrós *et al.*, 2020; Suter and Miller, 1973).

Under the theme of 'Planet', management practices and performance indicators related to SDGs 6, 7, 12, 13, 14, and 15 were examined. Embracing circular economy principles, business models aligned with reduction, reuse,

and recycling paradigms were assessed (Goyal *et al.*, 2018), along with raw material procurement methods and waste disposal techniques (Bigum, 2017; Missau, 2021). Resource consumption, particularly the consumption of water and energy, was evaluated, with an emphasis on efficient sourcing and management practices alongside investment in optimisation strategies (Raugei *et al.*, 2012; Sophocleous, 1997; Vilanova and Balestieri, 2015). Performance analysis included trends in energy (Simsek and Urmee, 2020) and water consumption (Keijzers, 2002), climate change mitigation and adaptation practices, emission control policies, and trends in air emissions, incorporating carbon footprint measurement practices (Meida *et al.*, 2013; Szybist *et al.*, 2007). Additionally, measures for preventing and controlling water discharges and soil contamination, as well as initiatives promoting marine and terrestrial biodiversity and ecosystem restoration, were assessed (Winn and Pogutz, 2013).

For the theme of 'Prosperity', management practices and performance indicators aligned with SDGs 8, 9, and 10 were examined. To promote sustainable economic growth, productive employment, and decent work, disciplinary procedures, codes of ethics, professional development opportunities, and industrial relations were investigated. Quality management systems and corporate digitalisation initiatives were evaluated for their role in fostering fair, responsible, and sustainable industrialisation (Eller *et al.*, 2020). Innovation practices and investment trends in research and development were analysed to assess organisational dynamic efficiency (Bulturbayevich, 2021). Economic performance was examined through profit and sales trends to explore the relationship between economic outcomes and sustainability objectives, and their potential to drive long-term competitive advantage (Tanaka, 2010).

In the area of 'Peace' (SDGs 11 and 16), anti-corruption measures were considered, alongside managerial initiatives promoting transparency and community engagement, aimed at strengthening reputation, employee satisfaction, and local well-being (Bandsuch *et al.*, 2008; Mahmud *et al.*, 2021).

Finally, under the theme of 'Partnership' (SDG 17), partnerships across the value chain, initiatives benefiting local communities, and communication with stakeholders concerning sustainability efforts were examined (Hopwood *et al.*, 2005).

V) Implementing and testing the model

On the basis of the analysis conducted in the previous phase and the references reported in the Annex, ten questions for each SDG were identified. These questions address aspects related to management and performance, providing insights into the company's innovation and sustainability profile based on the themes identified in the previous literature analysis. Each question is linked to findings from the literature analysis and highlights the most relevant issues for investigation. A total of 160 questions was identified (since the questions related to SDGs 1 and 2 were combined). Each response was assigned a score from 1 to 5, reflecting the level of managerial practices adopted by the company and its sustainability performance (with 1 being the minimum and 5

the maximum). This scale was adopted because a Likert scale running from 1 to 5 is widely recognised in management research as providing a structured, objective, and quantifiable measure that allows comparability across respondents and over time (e.g. Devellis and Thorpe, 2021). Using this scale enables the systematic aggregation and analysis of responses while maintaining sufficient nuance to capture differences in intensity and priority, which is particularly relevant when evaluating complex managerial and sustainability-related issues (Joshi *et al.*, 2015).

After collecting the responses, the mean value was calculated for each SDG to determine COMPANY's overall positioning. This provides a concise overview of COMPANY's strengths and weaknesses in sustainability, facilitating the identification of potential areas for improvement.

The tool was presented to COMPANY's management committee and BOD representatives during a meeting in February 2023. During the discussion, several adjustments to the tool were proposed; the particular aim of these was to customise the tool better to COMPANY's specific requirements and elevate it from its initial academic version to a tailored organisational solution.

Following the finalisation of the tool, the field-testing phase commenced. This involved additional managers responsible for internal control, environmental management, energy management, training, communications, external relations, and anti-corruption oversight. These managers were involved as key informants, providing data and operational insights related to their respective areas of responsibility in order to support the validation and refinement of the tool. Some also provided feedback during follow-up telephone conversations. These managers expressed interest in the assessment system and acknowledged the commitment of the senior management, although some raised concerns regarding the results in their own areas. There was a perception that the tool was being used by the top management to exercise some form of control over these managers' work, rather than to support their decision-making processes. Subsequent meetings made it clear that the process was designed to support organisational learning and to inform continuous improvement initiatives.

4.3 The Analysis Phase

We present the third phase of the constructive research below. Specifically, we examine the scope of the applicability of the solution, as shared with COMPANY's management; then, we outline the research contribution as the final step.

VI) Analysing the scope of the applicability of the solution

In a final meeting held approximately one year after the kick-off meeting, the findings were presented to the CEO, the project sponsor, and the management committee.

Based on the results across the different areas of interest, the governance representatives provided comments reflecting their priorities for potential sustainability projects. For example, in relation to environmental issues, a recommendation emerged to implement a carbon footprint measurement

system, alongside a proposal to test new paints with lower levels of organic solvents. Connecting to the 5 Ps of the 2030 Agenda (People, Planet, Prosperity, Peace and Partnership), within the theme of 'People' the HR manager identified the potential to introduce a 'Valuing Diversity' programme aimed at reducing the gender gap, with the ultimate goal of progressing towards gender equality certification. Another suggestion concerned the SA8000 certification process, which would provide an opportunity to standardise human rights practices. This initiative was considered valuable for enhancing staff satisfaction, improving work productivity, and complying with emerging human rights due diligence regulations across the supply chain (Directive (EU) 2024/1760 - CSDDD).

Within the theme of 'Prosperity', the IT manager highlighted the need to modernise the company's IT systems through a dedicated digital transformation plan. Additionally, a proposal was made to implement an accounting system focused on measuring the socio-environmental impacts of future investments. Other suggestions relating to 'Peace' and 'Partnership' included opportunities for engagement and communication initiatives to involve stakeholders in business processes. These encompassed employee mobility programmes, a multi-stakeholder communication programme with local community representatives, and a sustainability report aligned with internationally recognised standards and CSRD requirements.

Concerns were also raised regarding the alignment of existing improvement plans, including management system programmes, with the findings of the assessment phase. The production manager emphasised the importance of harmonising the overarching innovation and sustainability strategy with existing management tools, such as the ISO 14001 and ISO 45001 systems, to prevent duplication and ensure operational coherence. Integrating the issues identified within current management practices was therefore deemed essential for maintaining coherence and efficiency in the sustainability efforts.

During the meeting, the strategic priorities emerging from the SDG-based tool were summarised alongside the priorities arising from the coercive, normative, and cultural-cognitive sustainability pressures. These two perspectives were jointly mapped and compared in a matrix (Tab. 2) in order to support the corporate governance managers in defining a coherent and integrated sustainability strategy.

The matrix combines, on the one hand, the action priorities identified through the tool based on the 17 SDGs and, on the other, the priority themes emerging from discussions with the corporate governance managers under the influence of the coercive, normative, and cultural-cognitive pressures. Issues that were simultaneously perceived as urgent in the governance discussions and obtained a score below 50% in the tool were considered to be particularly critical and were therefore included in the matrix as shared priority areas. This dual-perspective approach enables the identification of convergences between internal strategic perceptions and the structured results of the SDG-based assessment.

Overall, the matrix provides corporate governance managers with a clear framework for prioritising actions over time, while also enabling them to manage institutional pressures in an integrated manner. This

approach allows the organisation to address sustainability priorities in a structured and strategic way, balancing short-term and long-term objectives according to their level of relevance.

In this perspective, the researchers propose that actions classified as high and medium-high relevance should be implemented in the short term (within one year), those of medium relevance in the medium term (within five years), and those of low relevance in the long term (beyond five years), thereby supporting a structured and strategic allocation of sustainability efforts.

Tab. 2: Process for the application of the tool and the strategic prioritisation of sustainability actions

		Priority themes identified by corporate governance managers under coercive, normative, and cultural-cognitive pressures		
		Low	Medium	High
Action priorities identified using the tool based on the 17 SDGs	High	Initiatives to enhance local community engagement and acceptance	Strengthening stakeholder engagement and communication	Introduction of a carbon footprint measurement system
	Medium	Modernisation of the company's IT system	Introduction of a 'Diversity enhancement programme'	Introduction of the SA8000 certification for the management and protection of human rights
	Low	Introduction of a socio-environmental impact assessment system for investments	Compliance with human rights and environmental due diligence requirements along the supply chain, in line with the CSDDD	Preparation of a sustainability report in accordance with the CSRD requirements

Source: Authors' elaboration

In the final stage of the project, the various governance representatives, representing different divisions, articulated distinct, and at times divergent, perspectives, which emphasises that there was a need to coordinate these inputs into a single, comprehensive strategy. This awareness influenced the CEO's final proposal, which was oriented towards the development of a global corporate sustainability strategy aimed at integrating the different strategic directions defined by the governance managers and simultaneously managing potentially conflicting pressures. The CEO further envisaged that, in the following months, each department would develop detailed operational plans-comprising objectives, targets, actions, indicators and resources-fully aligned with the strategic directions defined by the governance managers and characterised by a timing consistent with the matrix (Tab. 2), aligned with both the outputs of the tool and the priorities arising from the main institutional pressures affecting the organisation.

From an operational standpoint, integrating these plans into the company's management systems would facilitate the ongoing monitoring of selected indicators, ensuring alignment with the overall strategy defined

at the BOD level and demonstrating the practical value of the assessment tool.

A final report synthesising the entire process was subsequently delivered to COMPANY, representing the conclusion of the operational stage of the project.

VII) Demonstrating the research contributions

The results yielded several managerial and theoretical insights, as the final step of the process.

a. Theoretical contribution

Through following this entire process and using the tool, a corporate governance team is able to analyse different institutional pressures systematically, identify its own positioning in relation to them, and define the action priorities to be implemented within an integrated and comprehensive strategy. From this perspective, a governance team, through the proposed process, can adopt a temporal sequencing device allowing actions to be prioritised and sequenced according to their relevance and urgency, and thereby transform institutional tensions into a progressive and evolutionary pathway for strategic implementation. Corporate governance plays a pivotal role in steering the transition towards a sustainable organisational model, since organisational sustainability, conceived as a dynamic process based on learning and the creation of new structures and practices to adapt to continuously evolving conditions (Mitleton-Kelly, 2011), requires decision-making mechanisms capable of managing constant change and multiple, often conflicting, stakeholder interests. Within this context, sustainability pressures emerge from heterogeneous sources (socio-environmental factors, business imperatives, managerial responsibilities, and institutional relationships), highlighting tensions among competing objectives and expectations (Margolis and Walsh, 2003). Firms are thus challenged to balance social and environmental concerns with market demands for growth and profit maximisation (Fineman, 1997; Friedman, 1992; Lee and Rhee, 2007).

Governance functions as the architectural core that balances multiple, and at times incompatible, institutional logics characterised by tension and ambiguity (Dahlmann and Grosvold, 2017; Greenwood *et al.*, 2011). Institutional complexity, including normative, cognitive, and coercive pressures, significantly shapes the adoption of voluntary social and environmental responsibility initiatives (Marano and Kostova, 2016). Effective governance is therefore essential for navigating such complexities, managing internal and external conflicts, and ensuring a balanced approach to economic, social, and environmental objectives (Carmine and De Marchi, 2023).

The proposed approach strengthens the capacity of governance managers to develop an integrated mindset in which sustainability objectives are seen not as trade-offs but as interdependent dimensions requiring simultaneous consideration (Hahn *et al.*, 2015). The research process is original in that the mapping of institutional pressures revealed multiple tensions. These tensions generated misalignments and competing priorities that could not be addressed through linear decision-making

processes, particularly because of the coexistence of short-term economic pressures and long-term sustainability objectives. The tool aimed to create an internal prioritisation process that could be shared across the organisation and could help to overcome potential future internal conflicts.

Another important theoretical contribution of this study lies in the use of the United Nations 2030 Agenda as a conceptual and operational framework for the development of the tool. The 2030 Agenda constitutes an institutional framework of goals that enables the assessment of corporate actions in terms of their contribution to sustainability (Fu *et al.*, 2019; García-Sánchez *et al.*, 2020; Hepp *et al.*, 2019), representing a flexible international reference framework.

From this perspective, the present study contributes to the literature by showing how the adoption of the 2030 Agenda can support corporate governance managers in the early stages of managing institutional complexity, by identifying the full range of sustainability-related issues and by facilitating the design of integrated strategies capable of responding to multiple and heterogeneous pressures (García-Sánchez *et al.*, 2020). Alignment with the SDGs fosters the creation of a common language for sustainability governance and supports a more coherent allocation of resources towards long-term value creation.

The study addresses a gap in the existing literature (Urbieta, 2024), since research has predominantly focused on the measurement and communication of sustainability performance (Andreotti *et al.*, 2023; Hatayama, 2022), often concentrating on only a limited number of SDGs while neglecting others (Fărcean *et al.*, 2023). This highlights the absence of frameworks capable of considering all the goals of the 2030 Agenda simultaneously and translating them into coherent decision-making tools. The proposed tool overcomes this fragmentation by integrating all the SDGs within a single evaluation system and linking organisational commitment to measurable economic, social and environmental outcomes. In this way, the study addresses the lack of theoretical and operational frameworks that can coherently connect performance, strategy and sustainability (Vildåsen, 2018; Vincenzi *et al.*, 2025).

Finally, the contribution of the study is also embedded within the tradition of interventionist research (Jönsson and Lukka, 2007), demonstrating how the development of the tool serves as a bridge between theory and practice. The process developed enables the simultaneous management of potentially conflicting sustainability objectives, translating theoretical concepts into an operational instrument supporting corporate governance.

Overall, the study shows how corporate governance can evolve, through the process developed in this research, from a traditional control function into a strategic platform capable of transforming institutional complexity into opportunities for innovation and sustainable value creation.

b. Managerial contribution

The study offers substantial managerial contributions by providing organisations with a comprehensive and actionable framework for evaluating economic, social, and environmental pressures across both

internal and external contexts. At the heart of this framework lies corporate governance, ensuring that sustainability considerations are fully integrated into strategic decision-making. The main contribution of the research lies in the definition of an integrated and comprehensive tool, grounded in the themes of the SDGs, to support corporate governance, accompanied by a structured procedure for sequencing strategic and operational actions. The aim is to manage institutional pressures in a coordinated manner and translate them into concrete practices through managerial implementation. The process developed in this study enables the planning, integration and monitoring of governance decisions within a systemic logic, coordinating the different corporate functions and harmonising diverse managerial perspectives. The proposed tool enables organisations to assess both qualitative and quantitative sustainability dimensions, providing a clear snapshot of their current standing and supporting the formulation of targeted, governance-driven strategies. By positioning the SDGs at the centre of corporate strategy, this approach allows companies to assess their sustainability maturity and to foster a collective strategic commitment, designed and championed by the governance team and operationalised by management through ongoing performance monitoring and a long-term perspective (Vildåsen, 2018).

Empirically, the research bridges gaps in the existing literature by demonstrating the practical application of sustainability principles that have been insufficiently explored (Vincenzi *et al.*, 2025). The tool serves as an integrated mechanism for analysing sustainable business positioning, covering all dimensions of the 2030 Agenda, uniting management and performance data that are crucial for mitigating adverse impacts (Kure *et al.*, 2018), and evaluating managerial practices (Endrikat *et al.*, 2014; Horváthová, 2010). The project further confirms that advancing sustainable business practices requires sustainability principles to be embedded into core governance and operational workflows, ensuring strategic alignment and accountability. The tool provides a unified framework for translating sustainability objectives into actionable initiatives and performance indicators, supporting decision-making at the governance level and facilitating the tracking of progress and the evaluation of outcomes over time. It supports directors in determining concrete steps for embedding sustainability and innovation within corporate management systems while concurrently managing economic, social, and environmental demands. Corporate governance teams can utilise the tool to assess their sustainability positioning and identify potential actions related to institutional pressures; these actions can then be prioritised at governance level according to the most pressing normative, coercive, and cognitive-cultural sustainability needs.

Company-level testing demonstrated that the process encourages dialogue and coordination between the board, departments, and business units, fostering integrated and cross-functional solutions even in times of crisis, such as those experienced in the steel industry, when internal and external challenges intersect. This process promotes innovation and sustainability as shared platforms for strategic reflection and meta-planning at board and top management level, emphasising the

critical role of corporate governance as an integrative hub that aligns organisational responses to sustainability-related challenges. However, the implementation also highlights the need to couple the introduction of the tool with a process of cultural dissemination, led by the governance team and supported by active managerial engagement.

In summary, the research confirms that corporate governance is the primary driver of sustainable transformation, providing the architecture and strategic guidance required to reconcile conflicting sustainability objectives which, if neglected, may result in fragmentation and inefficiency. The findings demonstrate that governance is instrumental in harmonising internal organisational aims with global sustainability targets and fostering a unified and integrated approach to responsible corporate conduct through initiatives spanning all business functions. Consequently, the study advances the development of a sustainable governance model equipped with practical tools to navigate complex business environments, particularly in cases in which sustainability imperatives and profit objectives are in tension. By adopting this tool, companies can recalibrate their strategic priorities, enhance their long-term performance, and achieve a balance between profitability and social, environmental, and economic responsibility.

5. Conclusion

This research has developed a process to support corporate governance teams in their decision-making processes, contributing directly to the formulation and implementation of sustainability strategies, while recognising the central role of corporate governance in guiding and shaping such decisions (Aguilera *et al.*, 2021).

The process developed can be adopted as a guide to support strategic decision-making at the governance level and to guide the development of strategic directions for sustainability, which should be embedded within a shared sustainability culture across all organisational levels. It identifies long-term strategic directions aligned with the SDGs (Lee and Kim, 2021), enabling companies to address multiple and continuously evolving pressures. In particular, the tool and the matrix developed in this study facilitate the translation of these pressures into operational actions in support of a sustainable transition (Adams *et al.*, 2016). The process also enables governance bodies to systematically define and prioritise actions in response to actual sustainability pressures, supporting the development of strategies aimed at reducing the potential risk of future internal conflicts.

Despite the significant implications of the study, it has certain limitations. The tool, although designed to be applicable across various sectors and types of company, was tested exclusively in a steel industry context. Future research should extend the testing to different industries and countries to ensure broader applicability. While the tool aims to enhance sustainable performance in any company, evaluating the long-term effects of corporate plans in terms of their contribution to global objectives would be valuable,

necessitating longitudinal studies beyond the initial testing conducted with COMPANY.

Furthermore, the tool comprises a substantial number of questions to capture corporate sustainability comprehensively. Although these questions were developed based on the most frequently and consistently identified references emerging from the literature on the SDGs (reported in the Annex), this may also represent a limitation, as a fully systematic and comprehensive literature review was not conducted to define all thematic areas. As a result, some relevant dimensions of sustainability may not have been fully captured, and a more exhaustive theoretical grounding could further strengthen the instrument, particularly with regard to balancing managerial practices and performance-oriented dimensions.

Moreover, the extent to which the tool directly improves the effectiveness of decision-making processes cannot be fully demonstrated within the scope of this study. What emerges from its application is that it supported the identification of a more coherent and shared strategic orientation within the participating organisation, as well as priority areas for intervention. Further empirical validation of its impact on decision-making processes therefore represents a promising avenue for future research.

Nonetheless, the research stands out for its innovative character and practical contribution to corporate governance. It is anchored in a global political and institutional framework, the 2030 Agenda, which positions sustainability and innovation as fundamental pillars for development and value creation.

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Annex

P	SDG	Topics dealt with in the questions model	References
People	SDG 1 - SDG 2 No poverty and zero hunger	Projects to reduce poverty	Simmons R., Birchall J. (2008). The role of co-operatives in poverty reduction: Network perspectives. *The Journal of Socio-Economics*, 37(6), 2131-2140.
		Hunger reduction through corporate actions	Janssens C., Havlík P., Krisztin T., Baker J., Frank S., Hasegawa T., Leclère D., Ohrel S., Ragnauth S., Schmid E., Valin H. (2020). Global hunger and climate change adaptation through international trade. *Nature Climate Change*, 10, 829-835.
		Decent working conditions in the company and along supply chains	Hasle P., Vang J. (2021). Designing Better Interventions: Insights from Research on Decent Work. *Journal of Supply Chain Management,* 57(2), 58-70.
		Job opportunities for disadvantaged groups	Kumar D., Pratap B., Aggarwal A. (2019). Affirmative Action in Government Jobs in India: Did the Job Reservation Policy Benefit Disadvantaged Groups?. *Journal of Asian and African Studies*, 55(1).
		Contractual conditions	Robone S., Jones A.M., Rice N. (2011). Contractual conditions, working conditions and their impact on health and well-being. *The European Journal of Health Economics*, 12, 429-444.
		Relationships with external bodies to combat hunger and poverty	LaBarge O.R. (2019). Corporate Social Responsibility and the UN Sustainable Development Goals: How Business Drives Progress in the Scope SDGs #2 (Zero Hunger) and #8 (Decent Work and Economic Growth). *International Senior.*
		Turnover levels	Hulin C.L. (1968). Effects of changes in job-satisfaction levels on employee turnover. *Journal of Applied Psychology*, 52(2), 122-126.
		Fight against food waste and sustainable business models that can reduce food waste	Ribeiro I., Sobral P., Peças P., Henriques E. (2018). A sustainable business model to fight food waste. *Journal of Cleaner Production*, 177, 262-275.
		Engage the supply chain to improve its efficiency	Papargyropoulou E., Lozano R., Steinberger J.K., Wright N., Ujang Z. (2014). The food waste hierarchy as a framework for the management of food surplus and food waste. *Journal of Cleaner Production,* 76, 106-115.
		Working overtime	Beckers D.G., Van der Linden D., Smulders P.G., Kompier M.A., Taris T.W., Geurts S.A., (2008). Voluntary or involuntary? Control over overtime and rewards for overtime in relation to fatigue and work satisfaction. *Work & Stress,* 22(1), 33-50.
	SDG 3 Good health and well-being	Occupational health and safety rules	Salguero-Caparrós F., Pardo-Ferreira M.C., Martínez-Rojas M., Rubio-Romero J.C. (2020). Management of legal compliance in occupational health and safety. A literature review. *Safety Science*, 121, 111-118.
		Representative responsible for health and safety	Swuste P., Arnoldy F. (2003). The safety adviser/manager as agent of organisational change: a new challenge to expert training. *Safety Science*, 41(1), 15-27.
		Presence of evacuation plan	Logli M. (2009). Developing Evacuation Plans, Professional Safety. *Des Plaines*, 54(8), 44-45.
		Initiatives oriented towards organisational well-being	Wells M.M. (2000). Office clutter or meaningful personal displays: The role of office personalization in employee and organisational well-being. *Journal of environmental psychology,* 20(3), 239-255.
		Occupational injury frequency index trend	Laundry B.R., Lees R.E.M. (1991). Industrial Accident Experience of One Company on 8- and 12-Hour Shift Systems. *Journal of Occupational Medicine,* 33(8), 903-906.
		Index trend of the severity of accidents at work	Magness V. (2006). Strategic posture, financial performance and environmental disclosure: An empirical test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, 19(4).
		Trends in occupational diseases	Borup H., Kirkeskov L., Hanskov D.J.A., Brauer C. (2017). Systematic review: chronic obstructive pulmonary disease and construction workers. *Occupational Medicine,* 67(3), 199-204.

	SDG 4 Quality education	Trend of training initiatives	Acton T., Golden W. (2003). Training the knowledge worker: a descriptive study of training practices in Irish software companies. *Journal of European Industrial Training.*
		Initiatives in favor of the local community	Ozuem W., Lancaster G., Howell K. (2014). Corporate social responsibility: Towards a context-specific perspective in developing countries. S*ocial Responsibility Journal,* 10(3), 399-415. Husted B.W., Allen D.B. (2007). Corporate social strategy in multinational enterprises: Antecedents and value creation. *Journal of Business Ethics*, 74(4), 345-361.
		Relationships with schools	Giovannella C. (2021). An analysis of alternation schemes to increase student employability and the smartness of secondary schools. In *Ludic, Co-design and Tools Supporting Smart Learning Ecosystems and Smart Education: Proceedings of the 5th International Conference on Smart Learning Ecosystems and Regional Development* (pp. 39-51). Springer Singapore.
		Partnerships with schools for global citizenship education	Khusni S., Sudji M., Bruri T.M. (2022). Sustainable Partnership Strategy: Case Studies in Vocational High Schools and Partner Industries. *Qualitative Report*, 27(8), 1483-1498.
	SDG 5 Gender equality	Women's % in the company	Vandepitte J., Lyerla R., Dallabetta G., Crabbé F., Alary M., Buvé A. (2006). Estimates of the number of female sex workers in different regions of the world. *Sexually transmitted infections*, 82(3).
		Policies supporting emancipation	Holth L., Bergman A., MacKenzie R. (2016). Gender, availability and dual emancipation in the Swedish ICT sector. *Work, Employment and Society*, 31(2).
		Salary differences for men and women	Suter L.E., Miller H.P. (1973). Income Differences Between Men and Career Women. *American Journal of Sociology*, 78(4).
		Sexually coercive behaviors	Tata J. (1993). The Structure and Phenomenon of Sexual Harassment: Impact of Category of Sexually Harassing Behavior, Gender, and Hierarchical Level. *Journal of Applied Social Psychology,* 23(3), 199-211.
		Organisational well-being initiatives that benefit women	Burke R.J., Burgess Z., Fallon B. (2006). Organisational practices supporting women and their satisfaction and well-being. *Women in Management Review*, 21(5).
Planet	SDG 6 Clean water and sanitation	Amount of water withdrawn	Keijzers G. (2002). The transition to the sustainable enterprise. *Journal of Cleaner Production,* 10(4), 349-359.
		Amount of water reused	Vilanova M.R.N., Balestieri J.A.P. (2015). Modeling of hydraulic and energy efficiency indicators for water supply systems. *Renewable and Sustainable Energy Reviews,* 48, 540-557.
		Policies based on the use of company water resources	Sophocleous M. (1997). Managing water resources systems: Why" safe yield" is not sustainable. *Ground water*, 35(4), 561.
		Monitoring processes on the consumption of corporate water resources	Felgueiras C., Kuski L., Moura P., Caetano N. (2018). Water consumption monitoring system for public bathing facilities. *Energy Procedia*, 153, 408-413.
		Investments in water resource efficiency	Adamson D., Loch A. (2021). Incorporating Uncertainty in the Economic Evaluation of Capital Investments for Water-Use Efficiency Improvements. *Land Economics*, 97(3), 655-671.
		Staff training on hygiene	Ehiri J.E., Morris G.P. (1996). Hygiene training and education of food handlers: does it work. *Ecology of food and nutrition,* 35(4), 243-251.
		Information on the corporate water supply method	Schulte P., Morrison J., Gleick P.H. (2012). Corporate water management. In *The World's Water: The Biennial Report on Freshwater Resources* (pp. 23-43). Washington, DC: Island Press/Center for Resource Economics.

	SDG 7 Affordable and clean energy	Percentage of methane/ LPG/electric vehicles	Pfaffenbichler P., Emberger G. (2005). A reform of car parking organisation as an instrument for creating sustainable urban regions.
		Trend of renewable energy	Tsai S.B., Xue Y., Zhang J., Chen Q., Liu Y., Zhoug J., Dong W. (2017). Models for forecasting growth trends in renewable energy. *Renewable and Sustainable Energy Reviews,* 77, 1169-1178.
		Trend of fuel consumption in the business process	Chen J., Wu Y., Xu C., Song M., Liu X., (2019). Global non-fossil fuel consumption: driving factors, disparities, and trends. *Management Decision*, 57(4).
		Presence of a company policy on energy efficiency	Simsek Y., Urmee T. (2020). Opportunities and challenges of energy service companies to promote energy efficiency programs in Indonesia. *Energy*, 205, 117603.
		Investment in energy	Raugei M., Fullana-i-Palmer P., Fthenakis V. (2012). The energy return on energy investment (EROI) of photovoltaics: Methodology and comparisons with fossil fuel life cycles. *Energy Policy.*
		Investment in renewable energies	Bergmann A., Hanley N., Wright R. (2006). Valuing the attributes of renewable energy investments. *Energy Policy,* 34(9), 1004-1014.
		Staff training on energy issues	Jahr E. A. (1998). Current Issues in Staff Training. *Research in Developmental Disabilities,* 19(1), 73-87.
		Planned controls on energy resources	Rahman H.A., Majid S.M., Jordehi A.R., Gan C.K., Hassan M.Y., Fadhl S.O. (2015). Operation and control strategies of integrated distributed energy resources: A review. *Renewable and Sustainable Energy Reviews,* 51, 1412-1420.
	SDG 12 Responsible consumption and production	Measurement of the special waste produced	Bigum M. (2017). Environmental impacts and resource losses of incinerating misplaced household special wastes (WEEE, batteries, ink cartridges and cables). *Resources, Conservation and Recycling*, 12, 251-260.
		Materials and waste management and control system	Missau J. (2021). Charcoal Briquetting: An Environmentally Friendly Destination for Waste Materials. *Environmental Engineering Science*, 38(9).
		Method of selecting raw materials	Margaris A.V. (2014). Reconsidering Raw Material Selection. *Journal of Archaeological Method and Theory,* 21, 669–695.
		Packaging characteristics of products	Freeman B., Chapman S. (2008). The case for the plain packaging of tobacco products. *Addiction*, 103(4), 580-590
		Use of by-products (secondary raw materials)	Huisman J., Leroy P., Tertre F., Söderman M.L., Chancerel P., Cassard D., Løvik A.N., Wäger P., Kushnir D., Rotter S., Mählitz P., (2017). Prospecting Secondary raw materials in the Urban mine and Mining wastes: Final Report. ProSUM Consortium.
		Durability and future impact of the product	Murphy P., Pitchard M.P., Smith B. (2000). The destination product and its impact on traveller perceptions. *Tourism Management*, 21(1), 43-52.
		Indications on product disposal	Sarigöllü E., Hou C., Ertz M. (2021). Sustainable product disposal: Consumer redistributing behaviors versus hoarding and throwing away. *Business Strategy and the Environment,* 30(1), 340-356.

	SDG 13 Climate action	Measurement of atmospheric emissions	McKinnon A.C., Piecyk M.I. (2009). Measurement of CO2 emissions from road freight transport: A review of UK experience. *Energy Policy*, 37(10), 3733-3742.
		Measurement of the carbon footprint	Meida L.O., Brockway P., Letten K., Davies J., Fleming P. (2013). Measuring carbon performance in a UK University through a consumption-based carbon footprint: De Montfort University case study. *Journal of Cleaner Production*, 56, 185-198.
		Monitoring of the value chain on issues of emissions	Cooper J., Dubey L., Bakkaloglu S., Hawkes A. (2022). Hydrogen emissions from the hydrogen value chain-emissions profile and impact to global warming. *Science of The Total Environment*, 830, 154624.
		Emission control policies	Szybist J.P., Alam J.S.M., Boehman A.L. (2007). Biodiesel combustion, emissions and emission control. *Fuel Processing Technology,* 88(7), 679-691.
		Investments to make emissions into the atmosphere more efficient	Hammar H., Löfgren A. (2010). Explaining adoption of end of pipe solutions and clean technologies—Determinants of firms' investments for reducing emissions to air in four sectors in Sweden. *Energy Policy*, 38(7), 3644-3651.
		Training on emissions	Jahr E.A. (1998). Current Issues in Staff Training. *Research in Developmental Disabilities*, 19(1), 73-87.
		Commitment and awareness against climate change	Boiral O., Henri J., Talbot D. (2012). Modeling the Impacts of Corporate Commitment on Climate Change. *Business Strategy and the Environment*, 21(8), 495-516.
	SDG 14 Life below water	Measurement of pollutants in discharges	Sun W., Xu X., Lv Z., Mao H., Wu J., (2019). Environmental impact assessment of wastewater discharge with multi-pollutants from iron and steel industry. *Journal of Environmental Management*, 245, 210-215.
		Policy and mapping related to water discharges and assessment of potential environmental effects	Smith J.P., Mairs H.L., Brandsma M.G., Meek R.P., Ayers Jr, R. C. (1994, September). Field validation of the Offshore Operators Committee (OOC) produced water discharge model. In SPE *Annual Technical Conference and Exhibition?* (pp. SPE-28350). SPE.
		Presence of runoff rainwater	Blocken B., Derome D., Carmeliet J. (2013). Rainwater runoff from building facades: A review. *Building and Environment*, 60, 339-361.
		Investments in wastewater efficiency	Levidow L., Zaccaria D., Maia R., Vivas E., Todorovic M., Scardigno A. (2014). Improving water-efficient irrigation: Prospects and difficulties of innovative practices. *Agricultural Water Management*, 146, 84-94.
		Staff training on waste water	Jahr E.A. (1998). Current Issues in Staff Training. *Research in Developmental Disabilities,* 19(1), 73-87.
	SDG 15 Life on land	Reduction of the risk of soil contamination	Zhu Y.G., Shaw G. (2000). Soil contamination with radionuclides and potential remediation. *Chemosphere*, 41(1–2), 121-128.
		Spills on the ground	McGill W.B. (1977). Soil Restoration Following Oil Spills – A Review. *Journal of Canadian Petroleum Technology.*
		Use of potentially contaminating substances	Gogoi A., Mazumder P., Tyagi V.K., Chaminda G.T., An A.K., Kumar M. (2018), Occurrence and fate of emerging contaminants in water environment: A review. *Groundwater for Sustainable Development*, 6, 169-180.
		Quality of the soil where the farm is located	Liebig A.M., Doren J.W. (1999). Impact of Organic Production Practices on Soil Quality Indicators. *Journal of environmental quality*, 28(5), 1601-1609.
		Worker training	Jahr E.A. (1998). Current Issues in Staff Training. Research in Developmental Disabilities, 19(1), 73-87.
		Initiatives to protect biodiversity and restore ecosystems	Winn M.I., Pogutz S. (2013). Business, Ecosystems, and Biodiversity: New Horizons for Management Research. *Organisation and Environment,* 26(2).

Prosperity	SDG 8 Decent work and economic growth	Uunionization trends	Taylor R. (1999). Trade unions and transnational industrial relations. *Labour and Society Programme.*
		Grievance trends	Hoffmann E.A. (2018). Legal Consciousness and Dispute Resolution: Different Disputing Behavior at Two Similar Taxicab Companies. *Journals Law & Social Inquiry,* 28(3).
		Opportunity for corporate professional growth	Kutilek L.M., Earnest G.W. (2001). Supporting Professional Growth Through Mentoring and Coaching. *Journal of Extension*, 39(4).
		Sharing corporate profits	Kim W.C., Hwang P., Burgers W.P. (1989). Global diversification strategy and corporate profit performance. *Strategic Management Journal*, 10(1), 45-57.
		Industrial relations	Streeck W. (2016). The Internationalization of Industrial Relations in Europe: Prospects and Problems. *Politics & Society,* 26(4).
		Disciplinary procedures	Van der Bank L., Engelbrecht A.S., Strumpher J. (2008). Perceived fairness of disciplinary procedures in the public service sector: an exploratory study: empirical research. *SA Journal of Human Resource Management,* 6(2).
		Staff training on digital innovation	Konstantinidis S.T., Bamidis P.D., Zary N. (2021). Chapter One – Introduction to digital innovation in healthcare education and training. *Digital Innovations in Healthcare Education and Training*, 3-15.
		Supervisors in the workplace	Conchie S.M., Moon S., Ducan M. (2013). Supervisors' engagement in safety leadership: Factors that help and hinder. *Safety Science*, 51(1), 109-117.
	SDG 9 Industry, innovation and infrastructure	Sales trend	Tanaka K. (2010). A sales forecasting model for new-released and nonlinear sales trend products. Expert Systems with Applications, 37(11), 7387-7393.
		Investment trend in process innovations	Bulturbayevich M.B. (2021). *Improving the mechanisms of strategic management of innovation processes in enterprises.* Proceedings of Global Technovation, 4th International Multidisciplinary Scientific Conference.
		Investment trend in research and development	Lee M., Choi M. (2015). The Determinants of Research and Development Investment in the Pharmaceutical Industry: Focus on Financial Structures. Osong Public *Health and Research Perspectives,* 6(5), 302-309.
		Sustainable business models	Nosratabadi S., Mosavi A., Shamshirband S., Zavadskas E.K., Rakotonirainy A., Chau K.W. (2019). Sustainable Business Models: A Review. *Sustainability*, 11(6).
		Quality management	Sun H. (2000). A comparison of quality management practices in Shanghai and Norwegian manufacturing companies. *International Journal of Quality & Reliability Management*, 17(6).
		Sustainable innovation in transport	Greene D.L., Wegener M. (1997). Sustainable transport. *Journal of Transport Geography*, 5(3), 177-190.
		Level of digitization in the enterprise	Eller R., Alford P., Kallmünzer A., Peters M. (2020). Antecedents, consequences, and challenges of small and medium-sized enterprise digitalization. *Journal of Business Research,* 112, 119-127.
		External communication of economic indicators	Nováková R., Ovsenák V. (2015). Use of economic indicators for assessing the effectiveness of marketing communications. *Economy & Business*, 9.
		Structuring of research and development	Grabowski H.G., Mueller D.C. (1978). Industrial Research and Development, Intangible Capital Stocks, and Firm Profit Rates. *The Bell Journal of Economics,* 9(2), 328-343.

	SDG 10 Reduce inequalities	Trend of investments in social activities	Du S., Bhattacharya C.B., Sen S. (2010). Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication. *International journal of management reviews*, 12(1), 8-19.
		Implementation of CSR programs	Lindgreen A., Swaen V. (2010). Corporate Social Responsibility. *International Journal of Management Reviews*, 12(1).
		Professional growth of workers in the company	Sajuyigbe A.S., Bosede O., Adeyemi M.A. (2013). Impact of reward on employees performance in a selected manufacturing companies in ibadan. *International Journal of Arts and Commerce,* 2(2).
		Fight against tax evasion	Mocanu M., Costantin S., Răileanu V. (2021). Determinants of tax avoidance – evidence on profit tax-paying companies in Romania. *Economic Research-Ekonomska Istraživanja*, 34(1).
		Selection of suppliers based on sustainability criteria	Alikhani R., Torabi S.A., Altay N. (2019). Strategic supplier selection under sustainability and risk criteria. *International Journal of Production Economics,* 208, 69-82.
		Effective control of environmental and social risks	Rajesh R. (2019). Comprehensive analysis of social and environmental risk management strategies in resilient supply chains: An extensive periodical study using the Grey-Verhulst model. *International Journal of Production Research*, 57(11), 3748-3765.
		Adherence to codes of ethics	O'Dwyer B., Madden G. (2006). Ethical Codes of Conduct in Irish Companies: A Survey of Code Content and Enforcement Procedures. *Journal of Business Ethics,* 63, 217–236.
		Reporting on diversity management policies	Jaworska E. (2016). Diversity management and reporting in selected companies. Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, (434), 48-62.
		Remuneration linked to sustainability objectives	Hartikainen H., Järvenpää M., Rautiainen A. (2021). Sustainability in executive remuneration – A missing link towards more sustainable firms?. *Journal of Cleaner Production*, 324, 129224.
Peace	SDG 11 Sustainable cities and communities	Measures to identify impacts on biodiversity, environmental restoration mitigation and support for the SDGs	Bohnett E., Coulibaly A., Hulse D., Hoctor T., Ahmad B., An L., Lewison R. (2022). Corporate responsibility and biodiversity conservation: challenges and opportunities for companies participating in China's Belt and Road Initiative. *Journal Environmental Conservation*, 49(1).
		Communication of the ecological transition	Xiao W., Xiufeng Z., Yaxian W., Suzhen L. (2022). A Comparison of CSR Image Construction between Chinese and American Petroleum Companies in the Context of Ecological Transition. *Sustainability*, 14(21), 14490.
		Creation of inclusive human settlements	Angelidou M., Psaltoglou A. (2017). An empirical investigation of social innovation initiatives for sustainable urban development. Sustainable cities and society, 33, 113-125.
		Protection of the cultural and natural heritage	Masele F. (2012). Private Business Investments in Heritage Sites in Tanzania: Recent Developments and Challenges for Heritage Management. *African Archaeological Review*, 29, 51–65.
		Actions to support local communities	Vermeulen S., Nawir A.A., Mayers J. (2003, May). Better livelihoods through partnership? A review of the impacts of deals between communities and forestry companies on local development. In International Conference on Rural Livelihoods, Forests and Biodiversity (pp. 19-23).
		Sustainable mobility initiatives for workers	Nienaber A.M., Spundflasch S., Soares A., Woodcock A. (2021). Distrust as a Hazard for Future Sustainable Mobility Planning. Rethinking Employees' Vulnerability When Introducing New Information and Communication Technologies in Local Authorities. International Journal of Human–Computer Interaction, 37(4), 390-401.
		Projects for the benefit of local communities	Kerr S., Johnson K., Weir S. (2021). Understanding community benefit payments from renewable energy development. *Energy Policy*, 105, 202-211.

	SDG 16 Peace, justice and strong institutions	Corporate anti-corruption procedures	Mahmud N.M., Mohamed I.S., Arshad R. (2021). The supply-side of corruption: a review of scenario, causes and prevention measure. *Journal of Financial Crime*, 29(1).
		Staff training on corruption	Tabish S.Z.S., Jha K.N. (2012). The impact of anti-corruption strategies on corruption free performance in public construction projects. *Construction Management and Economics*, 30(1).
		Training on the human rights issues	Albdour A.A., Altarawneh I.I. (2012). Corporate Social Responsibility and Employee Engagement in Jordan. *International Journal of Business and Management*, 7(16).
		Corporate transparency	Bandsuch M., Pate L., Thies J. (2008). Leadership and Organisational Transparency in Corporate Governance. *Business and Society Review*, 113(1), 99–127.
		Ethical themes within the Statute	Bos-Brouwers H.E.J. (2009). Corporate sustainability and innovation in SMEs: Evidence of themes and activities in practice. *Business strategy and the Environment*, 19(7), 417-435.
		Remuneration linked to the objectives achieved	Ab Razak N.H. (2014). Director remuneration, corporate governance and performance: a comparison between government linked companies vs non-government linked companies. Corporate Board, 10(2).
		Involvement of the value chain on issues of peace, justice and equality	Rubin D., Manfre C. (2014). Promoting Gender-Equitable Agricultural Value Chains: Issues, Opportunities, and Next Steps. *Gender in Agriculture*, 287–313.
		involvement or participation of the value chain towards social responsibility issues	Boyd D.E., Spekman R.E., Kamauff J.W., Werhane P. (2007). Corporate Social Responsibility in Global Supply Chains: A Procedural Justice Perspective. *Long Range Planning*, 40(3), 341-356.
Partnership	SDG 17 Partnerships for the goals	Trend of sustainable promotional activities of local communities	Lu Y., Geng Y., Liu Z., Cote R., Yu X. (2017). Measuring sustainability at the community level: An overview of China's indicator system on National Demonstration Sustainable Communities. *Journal of Cleaner Production*, 143, 326-335.
		Stakeholder mapping	Newcombe R. (2003). From client to project stakeholders: a stakeholder mapping approach. *Construction Management and Economics*, 21(8), 841-848.
		Communication of sustainability actions to stakeholders	Peloza J., Loock M., Cerruti J., Muyot M. (2012). Sustainability: How Stakeholder Perceptions Differ from Corporate Reality. *California Management Review*, 55(1).
		Realization of the sustainability report	Hopwood B., Mellor M., O'Brien G. (2005). Sustainable development: mapping different approaches. *Sustainable Development*, 13(1), 38-52.
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		Involvement of the value chain in the sustainability process	Closs D.J., Speier C., Meacham N. (2011). Sustainability to support end-to-end value chains: the role of supply chain management. *Journal of the Academy of Marketing Science*, 39, 101–116.
		Sustainable international initiatives to improve environmental awareness	Joseph C., Taplin R. (2012). International initiatives influence on local government sustainability web-disclosures. *Social Responsibility Journal*, 8(4), pp.589-602.
		Integration of the SDGs into the corporate strategy	World Business Council for Sustainable Development (WBCSD) (2017). Better business, better world.
		Monitoring of the indirect sustainable impacts of the value chain	Tachizawa E.M., Gimenez C., Sierra V. (2015). Green supply chain management approaches: drivers and performance implications. *International Journal of Operations & Production Management*, 35(11), 1546-1566.

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