YEARBOOK OF UNWE (2025), ACADEMIC PUBLISHING HOUSE UNWE
ISSN (print): 1312-5486; ISSN (online): 2534-8949; http://unwe-yearbook.org/en/
DOI: https://doi.org/10.37075/YB.2025.1.06

ARTIFICIAL INTELLIGENCE FOR SUSTAINABLE BUSINESS PRACTICES: A CASE-BASED PERSPECTIVE ON GENERATIVE AND PREDICTIVE TECHNOLOGIES IN B2B OPERATIONS

Adriyan Dinev[1]
e-mail: adriyan.dinev@unwe.bg

Abstract

This article explores how artificial intelligence (AI), especially its predictive and generative forms, can contribute to sustainable development within B2B operations, with a special focus on Sustainable Development Goal 12 (SDG 12): Responsible Consumption and Production. Using a qualitative conceptual approach based on case studies, online sources and their connection to validated research in the field, the article examines the integration of AI technologies in two industry leaders – Maersk and Siemens. The findings illustrate how predictive AI, as the first type of algorithms considered, supports real-time decision-making and operational forecasting, while generative algorithms, on the other hand, promote innovation in logistics and industrial design. Based on the data, it is proven that AI-based technologies help reduce waste, improve resource efficiency and keep circular economy models sustainable. The study provides an initial foundation that can be further validated through empirical research and methodological frameworks, offering a valuable starting point for researchers and practitioners seeking to align AI applications with sustainability within the SDG12 framework in B2B environments.

Keywords: Artificial Intelligence, SDG 12, sustainable business, business operations

JEL: Q55, Q56, L86

Introduction

As more and more innovations enter our daily lives, companies need to think about how to use them in an efficient, yet environmentally friendly way. As industries face increasing pressure to align their operations with the principles of sustainable development, the integration of modern technologies is emerging as a critical lever for this transformational process. Global value chains are increasingly expected to reduce waste, optimize resource use, and operate with greater transparency and accountability in their operations. At the same time, the growing complexity of B2B operations requires intelligent systems that go beyond classic efficiency models. In this context, artificial intelligence (particularly pre-

[1] PhD Candidate, Department of Marketing and Strategic Planning, Faculty of Management and Administration, University of National and World Economy, Bulgaria, ORCID: 0009-0006-8550-9552

dictive and generative models) emerges as a key supporter for environmentally responsible industrial practices.

This article examines the theoretical and practical intersection between AI technologies and sustainable manufacturing strategies in a B2B environment. While there is currently a wealth of research exploring the transformative potential of technology in consumer-facing areas, fewer studies have explored how AI can be strategically embedded in B2B ecosystems to support SDG 12 goals. To provide a foundation for this area, this study conducts an integrative literature review and applies a qualitative, case-based methodology to analyze AI implementations at two global industrial leaders, Siemens and Maersk. Both companies are examples of the implementation of AI-powered platforms (e.g., predictive maintenance, digital twins, generative simulation) to manage emissions, optimize logistics and resource utilization, and support circular economy practices. The study provides a conceptual framework for understanding how AI contributes to sustainable transformation in B2B environments. It synthesizes academic insights, corporate reports, and policy-oriented data to build a structured view of the role of AI in reducing environmental impacts. The current analysis is exploratory and highlights innovation trajectories that can provide a foundation for both scholars and practitioners seeking to align technological innovation with sustainability goals and to support their ideas.

Literature Review

An overview of SDG 12

The Sustainable Development Goals (SDGs), sometimes referred to as the "Global Goals", were officially ratified by the United Nations in 2015 (UNDP Team, 2024). They serve as a comprehensive and inclusive initiative aimed at eradicating poverty, safeguarding the environment, and promoting peace and prosperity for all individuals by the year 2030. The 17 Sustainable Development Goals are interconnected, acknowledging that actions taken in one domain will have an impact on outcomes in other domains. Furthermore, the pursuit of development must strive to achieve a harmonious equilibrium between social, economic, and environmental sustainability. Nations have pledged to give priority to advancing the well-being of people who are the most disadvantaged. The SDGs aim to eradicate poverty, hunger, AIDS, and gender-based discrimination against women and girls. It is imperative to harness the creativity, expertise, technological advancements, and financial capabilities of all members of society in order to successfully accomplish the Sustainable Development Goals (SDGs) in any given situation (UNGC, 2024).

The focus of this scientific research is to address current business practices around SDG 12, directly related to responsible production and consumption. The purpose of the program (SDG 12) is to provide stable consumer and production patterns (SPC) while enhancing human well-being by separating economic growth from resource utilization and environmental deterioration (UNEP, 2024). Societal utilization and stewardship of natural resources profoundly influence human well-being, environmental health, and economic stability. A primary objective of the 2030 Agenda for Sustainable Development is to dissociate economic growth from resource use and environmental deterioration, particularly by enhancing resource efficiency. Globally, the use of material resources grew from 27 billion tonnes (Gt) in 1970 to 89 billion tonnes in 2017. This will increase further with continued population growth and economic development (OECD, 2019).

To address this problem, SDG 12 advocates for Sustainable Consumption and Production (SCP). This entails utilizing services and manufacturing products that reduce the consumption of natural resources and hazardous substances, as well as the development of waste and pollutants throughout the life cycle of the service or product, hence safeguarding the requirements of future generations. The transition to SCP patterns will allow nations and enterprises to fulfil their requirements and those of individuals while minimizing the consumption of natural resources and reducing pollution and environmental deterioration. Nonetheless, this necessitates interventions at several entrance points involving multiple stakeholders. Public policies are essential for establishing favorable conditions and impacting the market and economy comprehensively, encompassing sustainable public procurement policies and practices to promote sustainable innovation, as well as strategic subsidies to redirect investments from environmentally harmful practices. A significant shift of business processes throughout global value chains is necessary. Substantial progress has been achieved; nonetheless, large-scale implementation continues to pose challenges in years to come, alongside our capacity to expand and equitably allocate the socioeconomic advantages of this change (UN, 2015).

Despite significant efficiency improvements in recent decades, these advancements have not adequately counterbalanced the swift rise in global population and expanding middle class. According to the World Bank's SDG Atlas, global material use has increased substantially over the past four decades, tripling from 27 billion metric tons in 1970 to 92 billion metric tons in 2017. This surge in consumption has led to increased resource extraction and higher environmental costs, particularly affecting vulnerable populations. Inequality is widening, as high-income countries consume 10 times more resources per person than low-income countries, contributing disproportionately to environmental degradation. This unsustainable consumption and production pattern exacerbates environmental degradation and social inequality, often leading to political instability, conflict, and various social and health disparities. Addressing these disparities and transitioning to more sustainable consumption practices is crucial to reduce environmental pressures and promote equitable resource distribution (World Bank, 2021).

In this setting, technological innovation serves as a crucial facilitator of sustainability. Artificial intelligence (AI) has demonstrated significant promise to enhance resource use, minimize waste, and promote more sustainable production methods. As industries progressively integrate AI to advance sustainability objectives, it is essential to differentiate among various AI technologies and their functions in transforming company operations.

Artificial intelligence typologies and their role for sustainability

Artificial intelligence, when applied to business practices, can be categorized into many functional typologies. The phrase "artificial intelligence" itself is often used in a general way; however, recent research emphasizes a refined classification based on purpose, scope, and usage (Hüllermeier, 2021). This typology is particularly relevant when examining the relationship between AI capabilities and the goals outlined in Sustainable Development Goal 12 (SDG 12). Table 1 provides a summary of the three main AI categories, categorizing them based on their functionalities, commercial applications, and definitions used in the scientific literature.

Table 1: Typology of AI

AI Type	Definition	Source (Harvard Style)
Generative AI	Generative artificial intelligence refers to a group of AI algorithms and models capable of producing new content, including text, images, and other data types, by learning the structures and patterns in training data.	He, R., Cao, J., Tan, T. 2025. Generative artificial intelligence: a historical perspective, National Science Review.
Predictive AI	Predictive analytics uses statistical models and machine learning to forecast future events and trends based on historical data and discovered correlations.	Shmueli, G. and Koppius, O.R., 2011. Predictive analytics in information systems research, MIS Quarterly.
Prescriptive AI	Prescriptive AI builds upon predictive modeling by integrating optimization techniques to recommend the best course of action. (Bertsimas and Kallus (2019) provide a complex mathematical framework for transitioning from prediction to prescription using data-driven decision models.)	Bertsimas, D. and Kallus, N., 2019. From predictive to prescriptive analytics, Management Science, 66(3).

Source: Developed by the author based on cited sources.

The fields of Artificial Intelligence are vast. Generative and predictive AI share basic practical mechanisms that make them interrelated within the framework of AI design, although functionally different at first glance. Prescriptive AI is built on predictive so they already have linear connection. According to staff writer from IBM (2024), predictive AI "analyzes historical data to predict future outcomes", while generative AI "creates new content" by learning from existing models (Caballar, 2024). They have different functions, but both rely on similar datasets, machine learning models and statistical inference. The extent of this close relationship suggests that they can be seen as "technological cousins". Predictive AI focuses on assessing likely future developments, while generative AI can simulate or construct these future developments. Dynamics such as this, which complement the theoretical framework, is particularly important in the context of sustainability, where the ability to simultaneously predict and create can lead to effective, environmentally friendly and innovative solutions.

Artificial Intelligence is increasingly recognized as a transformative force for achieving the Sustainable Development Goals, especially SDG 12, which focuses on responsible consumption and production. According to Regona et al. (2024), AI has the potential to support sustainability in all phases of industrial operations – from planning and design to deployment and maintenance (Ragona, et al., 2024). Through the implementation of AI-driven automation, predictive analytics, and analytical decision-making tools, organizations can enhance resource efficiency and minimize environmental impact. Incorporating models that generate content or can predict outcomes into operations will increase the efficiency of companies. The authors underscore that ethical implementation, oversight of data, and appropriate education are essential for fully exploiting AI's potential in accordance with sustainable ideals. This way, innovations in corporations have to be synergized with trained data sets, so they meet all of the ethical and practical requirements.

Türkmen (2022) argues in his study that achieving sustainable economic growth requires effective alignment of several factors – macroeconomic policies, trade tactics and Sustainable Development Goal 12 (Türkmen, 2022). The author emphasizes the importance of the idea that countries should implement integrated regulations and foster innovative ecosystems that balance economic progress with environmental protection in order to move towards a green and economically resilient future. The research of Sharma et al. (2024) demonstrates that embedding AI into the dynamic capabilities framework – particularly within Industry 4.0 – facilitates the transition to more sustainable consumption models (Sharma, et al., 2024). AI is thus positioned not only as a tool for optimization but also as a strategic enabler of systemic transformation toward environmentally responsible growth. By integrating generative AI into the production processes, according to

Jaiswal and Pandey (2024), business can automate operations, simulate environmental impacts, and optimize decision-making in real time, thereby minimizing material usage and enhancing energy efficiency (Jaiswal & Pandey, 2024). These technologies are capable of modeling complex systems and refining many functions, even supply chains, which contribute to lower environmental footprints. Moreover, generative AI can facilitate predictive maintenance, improve resource allocation, and enable net-zero strategies when deployed responsibly, thanks to the advancements of technology. Nonetheless, the authors underscore the necessity of balancing AI adoption with policy safeguards, especially considering the high energy demands of AI model training, which could offset sustainability gains if not properly managed. Since it has become a common thing for technology to be implemented into the business processes, it is important to address their ethical implications.

As enterprises progressively integrate AI technology into their operations, the ethical and responsible implementation of these systems emerges as an essential concern. AI systems, especially generative technology, are frequently trained on extensive datasets that may unintentionally embody historical biases, hence perpetuating injustices in decision-making processes. These biases may result in inequitable practices in domains such as recruitment, resource distribution, and customer segmentation. If an AI algorithm is taught on biased data, it may unjustly favor specific demographic groups in supply chain decisions, hence intensifying societal inequities (Suresh & Guttag, 2021). Alongside mitigating prejudice, enterprises must guarantee that their AI systems exhibit transparency and accountability. Transparency denotes the capacity of stakeholders – such as employees, customers, and regulators - to comprehend the decision-making processes of AI systems. This transparency is essential for cultivating trust and ensuring that AI-generated results conform to organizational principles and legal standards.

Methodology

This research consists of using a qualitative methodological approach, including conceptual analysis and interpretive synthesis, established in a methodological review of academic literature and secondary data, along with case study analysis. The aim is to analyze the function of artificial intelligence, encompassing both generative and predictive forms, in facilitating the achievement of sustainability goals within business operations, in particular with SDG 12. In a future stage, it is possible to upgrade with more complex methodologies and include empirical data.

The research consists of three main components. First, a thematic literature review was conducted to identify key theoretical frameworks and recent developments related to the categorization and contribution of artificial intelligence to sustainability practices. The literature contains peer-reviewed journal articles, institutional reports and scientific reviews published between 2011 and 2025 and was analyzed to ensure both depth and scientific relevance.

Second, two corporate case studies - major multinational corporations Maersk and Siemens were selected to illustrate the practical application of AI technologies in real-world B2B operations, as they are among the leaders in their respective industries - supply chain and energy generation, making them both impactful and relevant as examples. These case studies were selected based on their demonstrated commitment to digital transformation and alignment with sustainability goals. Publicly available data, corporate sustainability reports, and existing academic assessments were used to map the AI-driven strategies each company is using to improve environmental performance and operational efficiency. Furthermore, the case studies are enriched through the author's synthesis, which includes sector-specific literature to identify critical patterns, lessons learned, and pathways for innovation.

Third, an integrative synthesis was conducted, combining insights from literature and empirical observations from the case studies. This synthesis allowed the identification of critical success factors and constraints in the use of AI for sustainable development.

This methodological design allows for the exploration of the transformative potential of AI within a sustainability-based framework, while maintaining flexibility for conceptual analysis and providing practical guidance according to the cases considered. The study lays a foundation that can be built upon in the future with more complex methodologies and the inclusion of empirical evidence.

Utilization of AI in Business Operations: Case study review

One of the key applications of AI lies in the product and process innovation. The tech can simulate various material properties, manufacturing processes, and environmental impacts, enabling businesses to design more sustainable products from the ground up. For instance, systems can help optimize product designs to minimize material use, improve energy efficiency, and reduce waste during the production process. Those innovations are particularly significant in industries such as manufacturing, energy production, supply chain and retail, where companies face increasing pressure to lower their environmental footprints. A study by Li demonstrates how AI-driven simulations help engineers optimize product designs for sustainability, leading to significant resource savings. In industries like fashion and clothing manufacturing, AI-powered design tools are being used to explore sustainable materials, predict future trends, and optimize supply chains, ensuring that companies do not overproduce and thus reduce textile waste (Li &

Li, 2021). These AI models can also anticipate consumer demand, allowing businesses to streamline inventory management and reduce overproduction, which is a common issue in many sectors.

Maersk – green transformation in transportation process management

Maersk, officially referred to as A.P. Moller – Maersk, is a Danish multinational corporation and a leading force in the global shipping and logistics industry (Maersk, 2025). With a complex, multi-layered B2B operational structure, the company engages with a broad network of business clients, making it an exemplary case of AI implementation in support of sustainability targets.

The integration of AI as a transformative technology in Maersk's logistics is strategically aligned with SDG 12. Although they do not officially state their work on this sustainable goal, the Danish company is making tremendous efforts to reduce their waste and carbon footprint. In recent years, Maersk has been using both predictive and generative AI systems to improve logistics efficiency and reduce environmental impact. Predictive AI is used to predict energy needs, equipment health, and supply fluctuations, thereby enabling real-time operational adjustments that limit energy waste. Generative AI, on the other hand, is applied in route optimization and transportation simulation, designing ideal logistics paths that reduce emissions and inefficiencies in multimodal supply chains.

Maersk's emissions dashboard plays a central role in their sustainability agenda. This tool visualizes carbon emissions across all modes of transport – sea, air, rail and road – enabling customers who use it, as well as themselves, to make environmentally informed logistics decisions in their operations. The Danish company's goal is to achieve net zero greenhouse gas emissions by the end of 2040 and 100% green operations by 2030. The company's data and targets are described in its 2024 annual report (Maersk, 2024). These ambitions are not without significant challenges, but the development of artificial intelligence plays a vital role in ensuring traceability, transparency and accuracy in decision-making to protect the environment.

In its operations, the company uses both types of AI that were discussed in the literature review. On the one hand, predictive models are used to predict shipping patterns, vessel fuel consumption and demand fluctuations, allowing for proactive route adjustments and load balancing. They play a central role in reducing waste and improving operational efficiency. For example, Maersk uses IoT sensors in its container fleet and port operations to track environmental metrics including temperature, fuel consumption and cargo handling efficiency in real time, which feeds data into machine learning algorithms for predictive maintenance and optimization. On the other hand, generative AI supports logistics planning through simulation-based optimization models. These generative models allow Maersk to reconfigure supply chain scenarios, evaluate alternative logistics routes and simulate energy consumption outputs. This results in reduced to more efficient vessel deployment, reduced downtime and drastically reduced emissions from container transport, which supports the company's sustainable footprint. According to research by Chen et al. (2024), which can well complement practical information, such logistics operations supported by artificial intelligence, when aligned with sustainability goals, can significantly reduce waste generation and carbon intensity through smarter resource allocation (Chen, et al., 2024).

As reflected in the company's most recent sustainability disclosures, the scale of both hazardous and non-hazardous waste remains substantial. This further highlights the critical role of AI-enabled logistics in enabling more efficient, predictive, and environmentally-conscious resource management strategies (Table 2).

Table 2: Waste Management Indicators for 2024 as Reported by Maersk

Indicator	**2024 Value**	**Page in Report**
Total waste	556,000 tonnes	Page – 108
Hazardous waste	236,000 tonnes	Page – 108
Non-hazardous waste	320,000 tonnes	Page – 108

Source: Maersk (2024).

The Maersk case is an example of the synergistic potential of AI, its two-way integration and its adaptation to the Internet of Things. This technology supports sustainability frameworks in large B2B environments, not only improving operational efficiency but also generating measurable environmental benefits. The integration of predictive and generative AI, supported by intelligent monitoring systems, establishes Maersk as a paradigm for sustainable logistics. Multiple innovation trajectories therefore emerge, including improved personalization of logistics services, increased automation through AI agents and the adoption of circular logistics models – all of which align with SDG 12 and the broader sustainable transformation of global supply chains (see Table 3). The Danish company can serve as a good example of a leader in this regard, by annually reporting on its contribution to several SDG goals, making it truly accountable for sustainability.

Table 3: AI Contributions to SDG 12 in the Case of Maersk

Indicator/Data	**How AI contributes to SDG 12**	**Example interpretation**
Reduced waste	Predictive AI forecasts demand and reduces excess	Less waste = higher efficiency
Increased energy efficiency	Generative AI optimizes processes and design	Lower costs and emissions
Share of recycled materials	AI manages reverse logistics and sorting	More materials are recycled
Reduced carbon emissions	Transport and production optimization	Smaller ecological footprint

Source: Author's representation

***Siemens* – an AI-driven sustainability**

Siemens AG, a global leader in industrial automation, infrastructure and energy technologies, provides a shining example of how AI can support sustainability in large-scale B2B environments. While the brand may be otherwise recognizable to consumers (B2C), the integrations and solutions that the company's R&D department creates are inevitably innovative. Siemens' internal transformation was integrated as a top-down initiative, led solely by central IT teams for the company. Siemens' internal transformation is integrated as a top-down initiative, led solely by central IT teams for the company. AI adoption has become a collaborative process involving engineers, factory personnel, and subject matter experts, according to a 2023 study (van Giffen & Ludwig, 2023). The process at the company has evolved from integrating tactical AI pilots in 2016, to strategic deployments over the next 2 years across operations, to democratizing the overall business vision after 2019. This idea of distributed deployment allows Siemens to create a faster adoption of predictive and generative AI tools that are directly aligned with SDG 12. This allows frontline employees to implement AI in ways that reduce energy waste, improve asset utilization, and support circular flows of resources – ultimately creating a scalable plan for industrial sustainability.

A Siemens press release from 2024, authored by Christoph Krösmann, introduces one of the company's new transformational innovations, the Hydrogen Plant Configurator. It is an AI-powered chatbot that interactively creates hydrogen plant layouts, block diagrams, and predicts operational metrics such as energy consumption and heat production (Krösmann, 2024). Technology itself incorporates both predictive and generative algorithms to be as effective as possible in shortening the design cycle and feeds directly into Siemens engineering platforms, thus streamlining the transition from concept to implementation. In addition, Siemens has also implemented Comos AI, an engineering assistant capable of interpreting natural language descriptions and transforming them into simulation-ready technical specifications and diagrams. These tools support responsible production and consumption practices that underpin SDG 12 by significantly reducing material waste, minimizing rework, and improving the accuracy and sustainability of industrial systems from the start.

In addition to specific tools such as the Hydrogen Configurator and Comos AI, Siemens is adopting a broader strategy of openness, transparency and ethical governance in the implementation of AI. According to the company, the focus is on explainable, human-centric and sustainable AI systems that are interoperable and aligned with the global SDG indicators and specifically SDG 12 (Siemens, 2025). These efforts are part of a more targeted transition to Industry 5.0, where human expertise and technology co-create sustainable value. A longitudinal study by Glazkova et al. (2024) found that such AI-based strategies can lead to measurable improvements: a 7% reduction in energy consumption, an 8% reduction in CO_2 emissions and a 12% drop in production waste over a five-year period (Glazkova, et al., 2024). The data highlights the transformative potential of AI-based sustainability strategies through the lens of a B2B context. This can be applied, as in companies like Siemens, by making this practice compatible with other companies and industries.

Academic insights further strengthen Siemens' leadership in responsible AI deployment. Franco et al. (2022) highlight that Siemens has evolved from a traditional ICT innovator to an orchestrator of industrial AI ecosystems, strategically balancing internal expertise with external openness (Franco, et al., 2022). This dynamic model not only improves technological capabilities but also ensures long-term value creation through ethical and sustainable digital innovation. As a result, Siemens is emerging as a benchmark for scalable and responsible AI deployment in support of SDG 12 and industrial transformation.

Conclusion and future orientation of the study

This study examines how generative and predictive AI can support sustainable development processes in B2B operations, with a focus on SDG 12: Responsible Consumption and Production. Through case studies and best practices from the perspective of Maersk and Siemens, the study shows that AI technologies can significantly improve operational efficiency, reduce waste and optimize resource allocation. On the one hand, generative AI enables the design and simulation of more sustainable industrial systems, while predictive algorithms contribute to proactive decision-making and minimizing environmental impact.

The review of sources confirms that AI and systems with generative and predictive algorithms are not just efficiency tools, but a strategic factor that helps implement sustainable practices. Measurable environmental benefits such as reduced emissions, energy consumption and production waste are analyzed through the lens of two companies. This illustrates the transformative potential of AI-driven sustainability in practice. Furthermore, the convergence of technological capabilities with human experience, as envisaged in the Industry 5.0 paradigm. Thanks to this synthesis, good directions can be drawn.

The conceptual nature and the placement of the author's analysis in the study provide a solid foundation for understanding the intersection between AI and sustainability, but in the future and for the purpose of extension, additional empirical verification will be needed. Future research should use rigorous methodologies – quantitative, qualitative or mixed – to test and measure the real impact of AI-driven strategies in different sectors and organizational settings. Such studies could deepen knowledge on the topic of how artificial intelligence supports responsible consumption and production, offering practical insights for both researchers and decision-makers aiming to accelerate sustainability in B2B environments.

Acknowledgements

I would like to express my sincere appreciation to Professor Dr. Hristo Katrandzhiev for his academic guidance and encouragement as a scientific supervisor to my academic journey.

References

Bertsimas, D. & Kallus, N. (2019). From Predictive to Prescriptive Analytics, Management Science, 66(3).

Caballar, R. D. (2024). Generative AI vs. predictive AI: What's the difference?, [Online] available at: https://www.ibm.com/think/topics/generative-ai-vs-predictive-ai-whats-the-difference

Chen, W. et al. (2024). Artificial Intelligence in Logistics Optimization with Sustainable Criteria: A Review, Sustainability, 16(9).

Franco, S. F., Graña, J. M., Flacher, D. & Rikap, C. (2022). Producing and using artificial intelligence: What can Europe learn from Siemens's experience?, Competition & Change, pp. 1-30.

Glazkova, V. et al. (2024). Evaluating the Impact of AI-Based Sustainability Measures in Industry 5.0: A Longitudinal Study, BIO Web of Conferences 86, pp. 1-13.

He, R., Cao, J. & Tan, T. (2025). Generative artificial intelligence: a historical perspective, National Science Review, pp. 1-15.

Hüllermeier, E. (2021). Prescriptive machine learning for automated decision making: Challenges and opportunities, arXiv preprint: 2112.08268.
Jaiswal, S. & Pandey, S. (2024). Exploring Generative AI as a Catalyst for Sustainability: Strategies for Waste and Energy Reduction, The Journal of Incisive Analysers, pp. 10-22.
Krösmann, C. (2024). Siemens press realease – Siemens accelerates hydrogen ramp-up with generative artificial intelligence, [Online], available at: https://press.siemens.com/global/en/pressrelease/siemens-accelerates-hydrogen-ramp-generative-artificial-intelligence
Li, M. & Li, T. (2021). AI Automation and Retailer Regret in Supply Chains, Production and Operations Management, pp. Volume31, Issue1, pp. 83-97.
Maersk. (2024). Sustainability Report – 2024, [Online], available at: https://www.maersk.com/sustainability/our-esg-priorities/climate-change
Maersk. (2025). Maersk – About, [Online], available at: https://www.maersk.com/about
OECD. (2019). Global Material Resources Outlook to 2060: Economic Drivers and Environmental Consequences. [Online], available at: https://www.oecd.org/en/publications/global-material-resources-outlook-to-2060_9789264307452-en.html
Ragona, M., Yigitcanlar, T., Hon, C. & Teo, M. (2024). Artificial intelligence and sustainable development goals: Systematic literature review of the construction industry, Sustainable Cities and Society, pp. 1-23.
Sharma, M., Singh, P. & Tsagarakis, K. (2024). Strategic pathways to achieve Sustainable Development Goal 12: A circular economy and Industry 4.0 perspective, Journal of Cleaner Production, pp. 5812-5838.
Shmueli, G. & Koppius, O. R. (2011). Predictive Analytics in Information Systems Research, MIS Quarterly.
Siemens. (2025). Artificial intelligence (AI) technology, [Online], available at: https://www.siemens.com/global/en/company/digital-transformation/artificial-intelligence.html
Suresh, H. & Guttag, J. (2021). A Framework for Understanding Sources of Harm throughout the Machine Learning Life Cycle, Equity and Access in Algorithms, Mechanisms, and Optimization.
Türkmen, N. C. (2022). Toward sustainable economic growth: Aligning macroeconomic policies and trade with SDG12, Journal of Lifestyle & SDG's Review, pp. 1-11.
UN. (2015). SDG Compass Report, [Online], available at: https://unglobalcompact.org/library/3101
UNDP Team. (2024). Sustainable Development Goals, [Online], available at: https://www.undp.org/sustainable-development-goals

UNEP. (2024). Issue Brief – SDG 12, [Online], available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/25764/SDG12_Brief.pdf?sequence=1&isAllowed=y

UNGC. (2024). Global Goals for people and planet, [Online], available at: https://unglobalcompact.org/sdgs/about

van Giffen, B. & Ludwig, H. (2023). How Siemens Democratized Artificial Intelligence, MIS Quarterly Executive, pp. 1-21.

World Bank. (2021). Responsible use of natural resources: Essential for sustainable growth: SDG12, [online], available at: https://datatopics.worldbank.org/sdgatlas/goal-12-responsible-consumption-and-production/?lang=en