

# THE ROLE OF MARKETING AND ENVIRONMENTAL KIBS TO IMPROVE THE IMPLEMENTATION OF SUSTAINABILITY AND CIRCULAR ECONOMY PRACTICES

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## ABSTRACT

In recent years, innovation has significantly influenced how firms approach the implementation of sustainability and circular economy practices. Firms are increasingly recognizing that adopting these practices is not only essential for regulatory compliance and environmental responsibility but also for competitive advantage in an eco-conscious market. Innovations in technology, product design, and business models are transforming the way companies operate. In this paper, we conducted a comprehensive literature review to analyze the critical role of marketing in facilitating the transition to sustainable and circular economy practices, and the presence of highly specialized firm that can help such transition. It emerged that Marketing serves as a bridge between innovation and consumer engagement, helping firms effectively communicate the benefits of their sustainable innovations.

Furthermore, we found out the presence of highly specialized firms, Environmental Knowledge-Intensive Business Services (E-KIBS), which provide expert support in this process. The collaboration between firms and E-KIBS is instrumental in ensuring that sustainability practices are not only implemented but are also clearly communicated to stakeholders, enhancing transparency, trust, and long-term value creation.

**KEYWORDS:** sustainability, circular economy, innovation, marketing, green marketing, E-KIBS

## INTRODUCTION

Sustainability aims to strike a delicate and harmonious balance between the three fundamental pillars, often called the "Three Ps": the planet, people, and profit. Its ultimate objective is to foster and nurture long-term economic growth, while simultaneously creating social opportunities and taking active measures to conserve and protect the environment. [1] Sustainability is essentially a vital and indispensable link that connects ecosystems with human social systems, meticulously managing resources to ensure the prosperity and well-being of both present and future societies. It catalyzes a profound and enduring change in our collective mentality, awakening in us a consciousness of the global impact we exert and the imperative to think beyond our immediate interests. [2] Social equity and justice are equally essential components

of the sustainability framework, working diligently to guarantee fair and equal access to opportunities and resources for all individuals. [3] Technology and innovation are paramount in driving positive change on both micro and macro levels. They empower us to mitigate our environmental footprint while augmenting the overall quality of life. [4] Embracing sustainability necessitates a profound and transformative shift in mindset, compelling us to recognize the significance of collaboration and collective action. Only through joint efforts is it possible to create a future that radiates optimism and prosperity for all, making sustainability the cornerstone of a brighter and more equitable world. At the core of sustainability lies the concept of circular economies, pioneered with the noble purpose of eliminating waste and promoting the reuse and resilience of resources. The theoretical foundations of the CE can be traced to different schools of thought and concepts. The definition of the CE depends largely on historical and development paths, as well as its function in organizations, industries, or regions. While it can be defined as a restorative economic model emphasising the importance of utilization and regeneration, it is also seen as an ideal system model or a framework of a closed economic system that functions without non-beneficial impacts on the natural and economic systems. [5] A restorative model moves us away from the extract-make-use-dispose (called "take-make-dispose" model") or linear thinking of a LCE and refers to the process of extracting the raw materials from the environment, making products, and then throwing them away, where they are eventually collected and sent to landfill. Rather, it argues that a closed-loop system that emphasizes reusing and regenerating finite resources is an alternate method of achieving sustainability. [6] CE is consequently a proactive approach, as it concentrates on pre-empting environmental discharge, and current approaches to this economic paradigm are firmly expressed in closed-loop operations and the potential release of innovative products and services. Summarizing, the circular economy approach is based on four principles called the "four R": Reduction, Reuse, Recycling and Recovery. Reduction means minimizing the use of resources and waste generation through efficient production processes and sustainable consumption patterns. [7] Reuse refers to extending the life cycle of products by reusing materials and components. [8] Recycling is the transforming of waste materials into new products, closing the loop in the production-consumption cycle. [9] Finally, Recovery means extracting value from waste through processes like composting and energy recovery. [10]

### **Theoretical frameworks**

The literature revealed three frameworks that emerged as the historical foundations for firm ability to implement sustainability and CE practices: Triple Bottom Line, Resource-Based View, and Dynamic Capabilities. The Triple Bottom Line (TBL) framework, introduced by Elkington in 1997, integrates three dimensions: economic, environmental, and social, emphasizing that businesses should not only focus on profit but also consider their impact on the planet and people. This holistic approach encourages companies to balance financial performance with social responsibility and environmental stewardship. [11] TBL has been widely adopted in assessing the sustainability of business practices, guiding firms in developing strategies that create long-term value for all stakeholders. Companies applying the TBL framework may

engage in activities such as reducing carbon emissions, promoting fair labour practices, and supporting community development. For instance, Patagonia, an outdoor clothing company, exemplifies TBL principles by committing to environmental sustainability using recycled materials and social initiatives like fair trade certification. [12] The Resource-Based View (RBV), proposed by Barney in 1991, posits that a firm's competitive advantage is derived from its unique resources and capabilities. In the context of sustainability and innovation, RBV suggests that firms with valuable, rare, inimitable, and non-substitutable resources can develop sustainable innovations that differentiate them from competitors. These resources may include technological expertise, strong leadership, a culture of innovation, and strategic partnerships. [13] RBV is particularly relevant in explaining how firms leverage internal resources to innovate sustainably. For example, Tesla's success in the electric vehicle market can be attributed to its distinctive resources, such as advanced battery technology, a strong brand, and a visionary leadership team. By capitalizing on these resources, Tesla has been able to drive sustainable innovation and maintain a competitive edge. [14] The Dynamic Capabilities framework, developed by Teece, Pisano, and Shuen in 1997, emphasizes a firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments. In sustainability, dynamic capabilities enable firms to adapt to evolving regulatory requirements, market demands, and technological advancements. This adaptability is crucial for firms seeking to innovate and implement circular economy practices. [15] Dynamic capabilities involve three main components: sensing opportunities and threats, seizing opportunities, and transforming the organization. Companies like Unilever have demonstrated dynamic capabilities by continuously adapting their business strategies to align with sustainability goals. Unilever's Sustainable Living Plan, which aims to reduce environmental impact and increase positive social impact, reflects the company's ability to sense market trends, seize opportunities for sustainable growth, and transform its operations accordingly. [16]

### **Drivers and motivations for sustainable practices**

Several influential studies have compellingly argued that socially and ecologically responsible business practices are widely regarded as the inevitable "wave of the future." These well-researched and thought-provoking studies suggest that early engagement in pro-environmental activities holds significant potential to provide a substantial competitive advantage in the growing landscape of environmentally conscious markets. This advantage is expected to lead to unprecedented success within the following years. The argument, grounded in principles of morality and ethics, highlights a promising path forward for businesses seeking profitability and environmental preservation. [17]

One of the primary drivers of sustainable and circular economy practices is the growing awareness of environmental degradation and resource depletion. Climate change, biodiversity loss, and pollution (especially plastic) have pushed governments, businesses, and societies to adopt more sustainable consumption and production patterns. Sustainable and circular economy frameworks aim to reduce waste, increase resource efficiency, and close material loops to mitigate these issues. [18] A significant

motivator for the adoption of sustainable practices is the potential for economic benefits. Peculiar business models can reduce raw material costs, generate new revenue streams, and extend the life cycle of products. By embracing circularity, companies can reduce operational costs and foster innovation in product design and business models. [19] Moreover, governments around the world are increasingly adopting policies that encourage or mandate sustainable practices. The European Union's Circular Economy Action Plan and China's Circular Economy Promotion Law exemplify how governments are driving the shift toward sustainability. Regulatory frameworks often incentivise businesses to transition to more circular operations or face penalties for failing to comply with environmental standards. [20] Additionally, public awareness of sustainability issues has increased consumer demand for environmentally friendly products and services. Companies are now more motivated to adopt circular economy principles to align with changing consumer preferences and demonstrate a commitment to corporate social responsibility. Businesses prioritising sustainability can enhance their reputation, attract environmentally conscious customers, and differentiate themselves from competitors. [10] Finally, technology plays a critical role in enabling the implementation of circular economy practices. Advances in digital technologies make it easier for companies to monitor and optimize their resource flows, minimizing waste and enhancing the circularity of production processes. [21]

### **Challenges and barriers to implement sustainable and circular economy practices**

The implementation of sustainability, in both practical and theoretical aspects, is generally based on many different barriers and obstacles organisations encounter when adopting this critical issue. These barriers might also serve as explanations as to why the notion of circular economy, with sustainability being one of its fundamental elements, has not brought about equal benefits to all organizations. [22] One of the most significant challenges to adopting sustainable and circular economy practices is the high upfront cost of transitioning to sustainable business models. Implementing circular processes often requires substantial investments in new technologies, infrastructure, and training. Small and medium-sized enterprises (SMEs), in particular, may find it challenging to secure the necessary financial resources to initiate these changes. [23]

Although regulatory frameworks drive these practices, the lack of standardization across regions and industries can pose a significant challenge. Differences in policies, tax structures, and sustainability standards between countries can create a complex regulatory environment for international businesses. This fragmentation makes it difficult for companies to fully integrate circular economy practices across their global operations. [24] Cultural and organizational inertia can also hinder the adoption of such practices. Shifting from a traditional linear business model to a circular one often requires a fundamental change in mindset and organizational structure. Employee, management, and stakeholder resistance to change can slow implementation. Moreover, businesses may struggle to align their operations with circular principles, especially if they have deeply entrenched practices centred on the "take-make-dispose" approach. [25] In addition, circular economy practices require a systemic approach to

supply chain management, involving coordination between multiple stakeholders, including suppliers, manufacturers, and consumers. Establishing reverse logistics, optimizing material flows, and maintaining product quality over multiple life cycles can be challenging, particularly for global supply chains. The complexity of these systems increases the difficulty of fully integrating circular principles into business operations. [26] Finally, while technology can drive the adoption of circular economy practices, the availability and accessibility of advanced technologies can be a limiting factor. Many regions, particularly developing countries, lack the infrastructure for effective waste management, recycling, and resource recovery. Additionally, the digital skills required to implement circular economy technologies may not be readily available, creating further barriers to widespread adoption. [8]

## **Business models**

Firms must implement specific business models to adopt sustainability and circular economy principles. Sustainable and circular business models are critical in driving resource efficiency, minimizing waste, and fostering long-term value creation while supporting innovation and resilience in an eco-conscious market.

Sustainable Business Models (SBMs) are frameworks that integrate environmental, social, and economic considerations into the core strategy of a business. They are designed to create, deliver, and capture value in ways that benefit the environment and society. Unlike traditional models focusing on profit maximization, SBMs emphasize long-term value creation by balancing the planet's and society's needs with financial returns. Bocken et al. [27] identified several archetypes of SBMs, including creating value from waste, substituting with renewables, and delivering functionality rather than ownership. These models challenge traditional business practices by prioritizing sustainability and long-term value creation. One notable example of an SBM is the Product-as-a-Service (PaaS) model, where companies retain ownership of products and offer them as services. This model incentivizes firms to design durable, repairable, and upgradable products, reducing waste and promoting resource efficiency. Philips, for instance, offers lighting solutions as a service, retaining ownership of the equipment and ensuring its efficient use and eventual recycling. [28]

Circular business models (CBMs) operationalize CE principles (the “4 Rs”), providing practical approaches for firms to create, deliver, and capture value sustainably. In literature, we can find different CBMs regarding:

- **Product Life Extension:** Business models that extend the life cycle of products through repair, refurbishment, and remanufacturing. Caterpillar, for example, offers remanufactured engines and components, providing cost savings and reducing waste. [29]
- **Sharing Platforms:** Platforms that facilitate sharing products and resources, reducing the need for individual ownership. Airbnb and Uber are notable examples of sharing platforms that optimize resource use. [30]
- **Collaborative Consumption:** Business models that promote sharing, renting, or leasing products instead of buying new ones. Zipcar's car-sharing service exemplifies collaborative consumption by providing vehicle access without ownership. [30]

Sustainable and circular business models are closely related, as both aim to address environmental and social challenges while ensuring economic viability. However, circular business models take a more focused approach by prioritizing resource efficiency and waste elimination through circularity. A company can adopt a circular model as a broader sustainable strategy.

### **Innovation in sustainability and circular economy**

The new economy is built on a solid foundation of sustainability, with a key objective being the decoupling of economic growth and societal well-being from the escalating and unsustainable consumption of energy and material resources. Within this framework, the discourse on the circular economy highlights the crucial role of innovation, stressing that it must be predominantly oriented toward sustainability. [31] A strong focus on creativity and invention is widely acknowledged as a key feature of the complex discourse surrounding innovation in sustainability and the circular economy, complementing the core principles of sustainability and resilience. Numerous studies propose comprehensive theories of socio-technical innovation (or transition) as a fundamental unit of analysis. These theories emphasize a dynamic, constructive, and future-oriented conception of innovation, motivated by pursuing positive and transformative change. [32] Additionally, it is imperative to recognize the indispensable role of institutions in shaping and influencing such innovative behaviour. Institutions, at various levels within the respective systems, play an instrumental part in cultivating an ecosystem that nurtures sustainable innovation. [33] This ecosystem encompasses the micro-level of individual firms, as well as the organizations responsible for the consumption of energy and resources. [34] Furthermore, it encompasses inventing and developing groundbreaking technologies, transformative products, services, and innovative business models intricately tied to such activities. [35] Thus, the holistic consideration and integration of innovation at all levels of these systems is critical for actualizing a sustainable future.

Innovation in Sustainability and CE can be divided into socio-cultural and technological groups. On the one hand, the proactive exploration and generation of ideas by individuals and groups aiming to enhance the quality of life for many can drive social and cultural innovations. These innovations often facilitate the realization of personal values or collective social goods that benefit society, such as freedom, security, participation, and, within this context, sustainability. [36] Sustainability transitions rely on the diffusion and adoption of socially driven changes. In this context, social and cultural consumption innovations play a key role. Several practices that may enable societies to reduce their environmental impact—particularly from specific consumption and production—are linked to shifts in the social and cultural motivations and meanings associated with consumption. [37]

On the other hand, in recent years, the digital revolution driven primarily by advancements in the Internet of Things (IoT), Blockchain, Big Data and Artificial Intelligence (AI)—all underpinned by broadband technology—has made significant progress. In this context, the circular economy concept has garnered increasing attention from large corporations, financial institutions, policymakers, and politicians while fostering the development of new business models. [38] They are aimed to

support the principles of circular economy and are developing and in place in the global market. IoT technologies can enhance resource efficiency by enabling real-time monitoring and management of products and processes. For example, smart meters and sensors can optimize building energy and water use. [39] Blockchain technology may improve transparency and traceability in supply chains, ensuring that materials and products are sourced and managed sustainably. Companies like Everledger use blockchain to track the provenance of diamonds and other high-value goods. [40] AI can optimize production processes, predict maintenance needs, and enhance recycling and waste management systems. AI-driven platforms like AMP Robotics use machine learning to improve the sorting and processing of recyclable materials. [41] These technological advancements have mainly been motivated by the overarching objective to achieve sustainable development goals. Among these goals, point number 12, focused on sustainable consumption and production, has been particularly influential in driving the adoption and promotion of these technological trends. [42]

Thus, innovation drives firms beyond relying solely on internal capabilities, as emphasized by frameworks like the Triple Bottom Line, Resource-Based View, and Dynamic Capabilities. Collaboration with external partners is crucial to implementing sustainable and circular economy practices. Other peculiar firms, such as Knowledge-Intensive Business Services (KIBS), play a pivotal role in this collaboration by providing specialized expertise, fostering innovation, and enabling firms to integrate sustainability into their operations. This external knowledge and support help companies overcome limitations in their internal resources and capabilities, ensuring more effective and comprehensive adoption of circular economy practices.

### **Knowledge-Intensive Business Services**

Knowledge-Intensive Business Services (KIBS) are firms characterized by their intensive use of specialized knowledge, often requiring professional expertise. According to Miles et al. [43], KIBS can be categorized into two broad types: Professional KIBS (P-KIBS) and Technological KIBS (T-KIBS). P-KIBS includes legal advice, accounting, management consulting, and marketing services, which rely on professional expertise and involve complex problem-solving and advisory roles. [44] P-KIBS knowledge typically comes from established professional disciplines and is applied to meet specific client needs. T-KIBS encompass services related to technology and science, such as IT consulting, research and development (R&D), engineering services, and technical consultancy. These services require a deep understanding of technical and scientific principles and are often involved in developing and implementing new technologies. [45] KIBS share several distinctive characteristics that differentiate them from other service sectors. They depend on specialized knowledge, often tacit, requiring advanced education and training to provide tailored solutions to clients. [46] KIBS also interact extensively with clients to understand their unique needs and co-produce customized solutions, necessitating close relationships and a deep understanding of client contexts. [47] KIBS are inherently innovation-driven, continuously seeking to improve their services and develop new knowledge and solutions, which is critical in fostering innovation within their firms and client base. [48] The service delivery process in KIBS often involves co-production

with clients, where clients provide essential inputs and collaborate closely with KIBS providers to achieve desired outcomes. [44] Furthermore, KIBS firms leverage intellectual capital—knowledge, skills, and expertise—as their primary assets, making effectively managing this intellectual capital crucial for their success. [49] KIBS play multiple economic roles, contributing significantly as knowledge brokers, facilitators of innovation, and enhancers of firm capabilities, impacting various economic development and competitiveness aspects. They serve as intermediaries in the knowledge economy, facilitating the transfer and transformation of knowledge across different sectors and firms, acting as bridges between knowledge producers and users, and helping to disseminate innovative ideas and practices. [50] KIBS also support the innovation processes of client firms by providing specialized knowledge and capabilities, engaging in problem-solving and strategic planning, and introducing new technologies essential for innovation. [51] Additionally, they enhance client firms' operational and strategic capabilities by providing expert services that improve processes, adopt new technologies, and develop competitive advantages, helping firms adapt to changing market conditions and technological advancements. [52] Innovation is fundamental to KIBS, encompassing both the creation of new services and the enhancement of existing ones. The innovation process in KIBS is driven by two main activities: knowledge exploitation, which involves refining and leveraging existing knowledge to improve services and maintain competitiveness, [49] and knowledge exploration, which focuses on research and development to generate new knowledge and innovative solutions essential for staying competitive. [53] Co-creating knowledge with clients is a key aspect of innovation in KIBS, where collaborative efforts develop new insights and solutions that enhance service value. [48] Moreover, KIBS are crucial in the diffusion of innovations, adapting and implementing new technologies and practices across industries, and extending the reach of advanced methods and technologies beyond their original contexts.

## **Research Questions**

In this intricate field, in which even changing innovation contaminates sustainability and a circular economy, does marketing play a role in implementing practices to foster sustainability and a circular economy? Are there any specialized firms, such as KIBS, that help during the implementation process? If yes, is there a connection between these specialized companies and the implementing firms marketing strategy? To answer these questions, this paper analyzes the literature to provide a complete overview of this topic.

## **METHODOLOGY**

A comprehensive literature research was conducted using Scopus database. We performed two Title-Keyword-Abstract research to identify the relevant literature regarding Marketing and KIBS in the field of sustainability and circular economy practices. The terms used as search keywords were: "(sustainabl\* OR circular econ\*) AND (KIBS OR Knowledge Intensive Business Services)" and "Marketing AND (sustainabl\* OR circular economy)". We used a combination of the logical operators AND/OR to perform a single exclusive and inclusive research. We decided not to



restrict to a temporal interval to capture the evolution of the concepts and the latest developments in the field. We included Peer-reviewed articles, reviews, books, and book chapters; only the literature published in English seminal; and articles belonging only to the “Business Management and Accounting” category.

The data collection process leads to 6136 documents. These documents can be divided into two groups: KIBS in Sustainability (n=343) and Business Models (n=5793).

From these results, we analyzed the most relevant papers for each literature strand to identify the most recurrent theme related to the role of marketing and KIBS in fostering sustainability and circular economy practices. The following criteria have been used:

- Relevance: The extent to which the study directly addresses the research questions.
- Number of Citations: Only works with more than five citations per year.
- Rigor: The study's methodological soundness, clarity, and robustness of the research design and analysis.
- Credibility: The reputation of the publication source and the authors' qualifications.
- Contribution: The study's contribution to understanding KIBS and marketing in sustainability and circular economy.

We found that the most relevant themes were Environmental KIBS and Green Marketing. Moreover, Green Marketing can be subdivided into other subcategories: consumer behaviour, branding and positioning, storytelling, co-creation, building transparency and trust, and engaging with stakeholders. Finally, we qualitatively evaluated the possible role of E-KIBS in the firms' implementation of marketing strategies for sustainability and CE. All the methodology flow is reported in Figure 1.

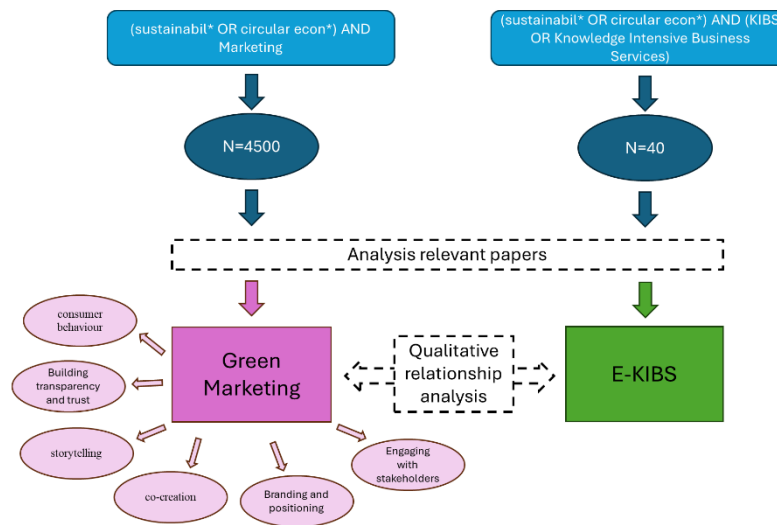


Figure 1: Flow Chart describing the methodology adopted for the comprehensive literature research.

## RESULTS

## **The role of marketing in the implementation of sustainability and Circular Economy Practices**

Innovation and marketing are closely interlinked in successfully implementing sustainability and circular economy (CE) practices. Innovation drives the development of eco-friendly products and processes, while marketing plays a critical role in bridging the gap between these innovations and consumer awareness, acceptance, and behaviour. This relationship is essential because effectively communicating the value of circularity and sustainability through marketing strategies drives consumer engagement, builds brand loyalty, and helps differentiate products in an increasingly eco-conscious market. Marketing helps translate environmental goals into marketable and profitable strategies by positioning sustainable products as desirable, promoting long-term value, and fostering sustainable consumer habits.

The marketing in this field is known as Green Marketing or Eco-Marketing. It refers to promoting products and services based on their environmental benefits. It is a strategy highlighting how a company's offerings reduce environmental impacts, conserve resources, or contribute to sustainability. Green marketing plays a key role in the circular economy by emphasizing the benefits of circular products and services—durability, recyclability, and resource efficiency—thereby appealing to environmentally conscious consumers. [54] In the context of circular economy practices, green marketing can showcase how products are designed for longer life cycles, how they can be easily repaired or upgraded, or how they contribute to reducing waste through recycling or reuse. Communicating these aspects effectively helps companies differentiate their products in competitive markets, especially as consumer demand for sustainable options grows. [55]

### ***Consumer Behaviour***

Understanding consumer behaviour is crucial for effectively marketing circular economy practices. Research indicates that consumer attitudes toward sustainability have evolved, with a growing population placing importance on environmental considerations when purchasing. [56] However, there is often a gap between consumers' stated preferences for sustainable products and their actual purchasing behaviour, known as the "attitude-behaviour gap." While many consumers express interest in sustainable products, price, convenience, and perceived product quality can deter them from making eco-friendly choices. [57] To address this gap, marketers must focus on conveying the tangible benefits of circular products. For example, emphasizing cost savings from durable or repairable goods or the convenience of product-as-a-service models can incentivize consumers to choose circular options. Additionally, marketers can appeal to consumers' values by highlighting how their purchasing decisions can contribute to broader environmental goals, such as reducing waste and conserving resources. [58]

Shifting consumer behaviour is a key goal of marketing in the circular economy. Behavioural change initiatives require sustained engagement and education, such as encouraging consumers to repair products instead of replacing them, return products

for recycling, or participate in sharing platforms. Marketing campaigns emphasising ease of participation, rewards for circular behaviour, and community involvement can drive long-term behavioural change. [59]

Marketers can also use behavioural nudges—subtle cues or incentives that encourage specific actions—to promote sustainable behaviour. For example, offering discounts for returning used products for recycling or highlighting the environmental benefits of choosing circular products at the point of sale can nudge consumers toward more sustainable choices. [60]

### ***Branding and Positioning***

Branding is a powerful tool for promoting circular economy practices. Companies that integrate sustainability into their brand identity can create a strong emotional connection with environmentally conscious consumers. Sustainable branding involves aligning a company's core values, mission, and marketing messages with circular economy principles, such as resource efficiency, waste reduction, and ethical production. [61] Brands that successfully position themselves as leaders in sustainability can differentiate themselves from competitors and attract a loyal customer base. [62] Companies like Patagonia and IKEA have effectively used their brand positioning to promote circular economy initiatives. Patagonia's "Worn Wear" program encourages customers to repair and reuse their clothing, reinforcing the brand's commitment to sustainability and resource conservation. Similarly, IKEA's initiatives around product take-back and furniture recycling align with its brand values of affordability and sustainability. [63]

### ***Storytelling***

Storytelling is an essential marketing strategy for promoting circular economy practices. By telling the story behind a product's creation, use, and end-of-life, companies can engage consumers on an emotional level and create a sense of shared responsibility for environmental stewardship. Effective storytelling can make abstract concepts like circularity more tangible and relatable for consumers, helping them understand the positive impact of their purchasing decisions. [64] For example, brands that use recycled materials in their products can highlight the journey of those materials—from waste to a new product—thereby creating a narrative that resonates with consumers' desire to contribute to environmental solutions. These stories not only promote the product but also reinforce the company's broader commitment to sustainability and circularity.

### ***Co-creation***

Another innovative marketing approach in the circular economy is co-creation, where consumers are actively involved in the design, production, or disposal processes of products. Co-creation empowers consumers by allowing them to customize products to meet their needs or participate in the product's end-of-life strategy, such as recycling or repurposing. This level of involvement fosters a deeper connection between the consumer and the brand, increasing loyalty and encouraging sustainable behavior. [65] By inviting consumers to contribute ideas for product improvements, recycling

initiatives, or sharing economy platforms, companies can create a collaborative relationship that enhances both brand loyalty and environmental impact. Co-creation aligns with the circular economy's emphasis on shared responsibility and collective action in addressing environmental challenges.

### ***Building transparency and trust***

One of the key marketing challenges in the circular economy is simplifying and effectively conveying complex ideas like circularity and sustainability in ways that connect with consumers. Concepts such as product-as-a-service, leasing, and sharing platforms require consumers to shift their mindset from owning products to accessing them, from disposable habits to focusing on durability. Marketers must develop clear, compelling messages that explain the benefits of circular products and services, including lower long-term costs, reduced environmental impacts, and increased product value. [10] Moreover, successful communication of circular economy principles hinges on transparency and trust. As consumers grow increasingly skeptical of companies making exaggerated environmental claims, marketers must avoid greenwashing—misleading consumers about a product's environmental benefits. Instead, they should adopt transparent strategies that provide verifiable evidence of circular practices, such as certifications, lifecycle assessments, or third-party audits. [66] Companies are also leveraging storytelling to enhance transparency and trust. By sharing the lifecycle of their products, from sourcing to end-of-life, they build deeper connections with consumers, reinforcing their commitment to sustainability. This approach not only boosts brand loyalty but also encourages consumers to become advocates for sustainable practices. Authenticity is critical in marketing circular economy products, and companies must ensure that genuine, verifiable practices back all sustainability claims.

### ***Engaging with stakeholders***

Effective marketing in a circular economy context is not limited to consumer engagement; it also involves collaboration with multiple stakeholders, including suppliers, regulators, and environmental organizations. Marketing can help firms build solid partnerships and networks that support the circular economy by promoting transparency and fostering collaboration across the value chain. [67] This approach aligns with sustainability principles, where shared responsibility across the supply chain is crucial for creating circular business models.

### **Environmental KIBS (E-KIBS)**

As mentioned, there has been a growing connection between the circular economy paradigm and service research, focusing on how business activities can contribute to environmental sustainability. Within this evolving context, the cultural characteristics and strategic KIBS have been reinterpreted and expanded within the framework of CBMs and practices. [68-70] Exploring the literature, here is a particular subset of KIBS that promote the development of CBSs: the Environmental-KIBS (E-KIBS). E-KIBS specifically cater to environmental needs, offering services in areas such as

environmental consulting, waste management solutions, renewable energy advisory, environmental impact assessments, eco-design and sustainability strategies. [71-75]

E-KIBS are positioned within the broader KIBS framework as a specialized category integrating environmental knowledge with business services. Depending on the nature of the services provided, E-KIBS can be seen as a hybrid category that overlaps with P-KIBS and T-KIBS. When E-KIBS provide advisory and consulting services, they align closely with the characteristics of P-KIBS. These services rely on professional expertise in environmental science, policy, and management to deliver customized solutions to clients. For instance, environmental consultants provide tailored advice on regulatory compliance, environmental strategy, and sustainability reporting, similar to the advisory roles found in traditional P-KIBS. [44] E-KIBS that apply green technologies and engineering solutions can be classified as T-KIBS. These services require specialized technical knowledge in renewable energy, sustainable design, and pollution control. E-KIBS in this category focuses on developing and implementing technological solutions that enhance environmental performance and are aligned with the innovation-driven services of traditional T-KIBS. [48] According to Brouwers and De Jong [76], E-KIBS can be broadly categorized into three main areas: Environmental Consulting, Sustainable Engineering, and Green Technology Solutions. Environmental consulting involves expert advice on environmental policies, regulations, and practices. Services include environmental impact assessments, environmental management systems, regulatory compliance audits, and sustainability reporting. Consultants work with clients to identify environmental risks, develop mitigation strategies, and ensure adherence to environmental standards. [77] Sustainable engineering services focus on designing and implementing sustainable solutions in construction, manufacturing, and other industries. This includes green building design, energy-efficient systems, waste management, and water resource management. Sustainable engineers apply environmental science and engineering principles to create systems that minimize environmental impact and enhance resource efficiency. [78] Green technology solutions involve developing and deploying technologies that reduce environmental impact. This includes renewable energy technologies, pollution control systems, sustainable materials, and green infrastructure. Green technology solutions providers work on integrating innovative technologies into business processes to enhance environmental performance and reduce carbon footprints. [79]

The hybrid nature of E-KIBS reflects its dual focus on professional expertise and technological innovation. It draws on professional knowledge to provide strategic environmental advice and leverages technological capabilities to implement sustainable solutions. This dual focus positions E-KIBS uniquely within the KIBS framework, bridging the gap between traditional consulting and technical services.

### **The role of E-KIBS in Green Marketing**

We found no studies relating E-KIBS to Green marketing in the literature. But does this mean that E-KIBS are not connected with Green Marketing? The answer is no; there are no studies because the field of E-KIBS is still ungrown and poorly developed, but we can find some answers to this connection by looking into the KIBS literature as E-KIBS are a subgroup of them.

In this way, we extrapolated that Environmental knowledge-intensive Business Services can play a key role in offering strategic consulting that helps companies align their marketing with sustainable goals. Developing eco-branding, eco-labeling, and crafting messages around sustainability helps businesses appeal to environmentally-conscious consumers. [45] Furthermore, E-KIBS are pivotal in product innovation, particularly in designing products that meet sustainability goals and market demands. By providing technical knowledge on materials, production processes, and product lifecycles, E-KIBS help businesses develop products that can be marketed for durability, recyclability, and low environmental impact. In this way, marketing departments can position circular products as superior alternatives to traditional offerings, enhancing their appeal to consumers. [72] E-KIBS also help companies navigate environmental regulations and acquire sustainability certifications, such as ISO 14001 or B Corp, which are powerful tools in marketing. These certifications enable businesses to demonstrate transparency and credibility, crucial in an era of growing scepticism over greenwashing. Marketing strategies that leverage these certifications build consumer trust, making sustainability claims more credible and enhancing brand reputation. [66] In addition, E-KIBS provide data-driven insights through lifecycle assessments and environmental impact reports, which serve as the foundation for transparent marketing campaigns. These campaigns are increasingly important as consumers demand proof of sustainability efforts, and marketers can use data to substantiate their claims and differentiate their products. [48] Companies also use storytelling as a marketing tool, supported by E-KIBS, to connect consumers with the sustainability journey of their products, from sourcing to disposal. This type of marketing fosters brand loyalty and encourages consumers to advocate for sustainable practices. Authenticity in these marketing messages is vital, and E-KIBS help ensure that genuine, sustainable practices back all claims. [80]

## CONCLUSION

In conclusion, as businesses increasingly transition to sustainable models, marketing serves as a critical tool for communicating the value of sustainable innovations to consumers and stakeholders. It plays a key role in shaping consumer perceptions, building brand loyalty, and promoting eco-friendly behaviors through strategic messaging. However, marketing also faces challenges such as the need to convey complex circular economy concepts and avoiding greenwashing, where false environmental claims are made. Here, the internal capabilities of firms cannot be enough thus firms can ask support from other high specialized firms as KIBS. In particular, Environmental KIBS may contribute to marketing efforts by providing specialized expertise that strengthens the credibility and effectiveness of sustainability messaging. These services offer data on environmental impacts, help companies obtain sustainability certifications, and ensure compliance with regulations, all of which are essential for transparent and trustworthy marketing. Additionally, E-KIBS assist in co-creation processes, allowing businesses to engage with consumers in the development of sustainable products that meet both environmental standards and market demands. By combining the strengths of marketing and E-KIBS, companies can more effectively

promote sustainable practices, build consumer trust, and differentiate their products in an increasingly eco-conscious market.

## REFERENCES

1. Clune, W. H. & Zehnder, A. J. B. (2020). The evolution of sustainability models, from descriptive, to strategic, to the three pillars framework for applied solutions. *Sustainability Science*.
2. Haskell, L., Bonnedahl, K. J., & Stål, H. I. (2021). Social innovation related to ecological crises: A systematic literature review and a research agenda for strong sustainability. *Journal of Cleaner Production*.
3. Abramovich, N. & Vasiliu, A. (2023). Sustainability as fairness: A Rawlsian framework linking intergenerational equity and the sustainable development goals (SDGs) with business practices. *Sustainable Development*.
4. Rodríguez-Espíndola, O., Cuevas-Romo, A., Chowdhury, S., Díaz-Acevedo, N., Albores, P., Despoudi, S., ... & Dey, P. (2022). The role of circular economy principles and sustainable-oriented innovation to enhance social, economic and environmental performance: Evidence from Mexican SMEs. *International Journal of Production Economics*, 248, 108495.
5. Kirchherr, J., Yang, N. H. N., Schulze-Spüntrup, F., Heerink, M. J., & Hartley, K. (2023). Conceptualizing the circular economy (revisited): an analysis of 221 definitions. *Resources, Conservation and Recycling*, 194, 107001.
6. Kara, S., Hauschild, M., Sutherland, J., & McAloone, T. (2022). Closed-loop systems to circular economy: A pathway to environmental sustainability?. *CIRP Annals*.
7. Ellen MacArthur Foundation. (2013). *Towards the circular economy: Economic and business rationale for an accelerated transition*. Ellen MacArthur Foundation.
8. Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A review on circular economy: The expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production*, 114, 11-32.
9. Lieder, M., & Rashid, A. (2016). Towards circular economy implementation: A comprehensive review in context of manufacturing industry. *Journal of Cleaner Production*, 115, 36-51.
10. Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221-232.
11. Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st-century business*. Capstone.
12. Chouinard, Y., & Stanley, V. (2012). *The responsible company: What we've learned from Patagonia's first 40 years*. Patagonia.
13. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.

14. Wells, P., & Nieuwenhuis, P. (2012). Transition failure: Understanding continuity in the automotive industry. *Technological Forecasting and Social Change*, 79(9), 1681-1692.
15. Teece, D.J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18: 509-533.
16. Unilever. (2014). Sustainable living plan. Unilever.
17. Kuo, F. I., Fang, W. T., & LePage, B. A. (2022). Proactive environmental strategies in the hotel industry: Eco-innovation, green competitive advantage, and green core competence. *Journal of Sustainable Tourism*.
18. Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The circular economy – A new sustainability paradigm? *Journal of Cleaner Production*, 143, 757-768.
19. Ellen MacArthur Foundation (EMF). (2015). Growth within: A circular economy vision for a competitive Europe. Retrieved from <https://ellenmacarthurfoundation.org>
20. Korhonen, J., Honkasalo, A., & Seppälä, J. (2018). Circular economy: The concept and its limitations. *Ecological Economics*, 143, 37-46.
21. Urbinati, A., Chiaroni, D., & Chiesa, V. (2017). Towards a new taxonomy of circular economy business models. *Journal of Cleaner Production*, 168, 487-498.
22. Nobre, G. C. & Tavares, E. (2021). The quest for a circular economy final definition: A scientific perspective. *Journal of Cleaner Production*.
23. Ranta, V., Aarikka-Stenroos, L., Ritala, P., & Mäkinen, S. J. (2018). Creating value in the circular economy: A structured multiple-case analysis of business models. *Journal of Cleaner Production*, 201, 988-1000.
24. D'Amato, D., Droste, N., Allen, B., Kettunen, M., Lahtinen, K., Korhonen, J., ... & Toppinen, A. (2017). Green, circular, bio economy: A comparative analysis of sustainability avenues. *Journal of Cleaner Production*, 168, 716-734.
25. de Jesus, A., & Mendonça, S. (2018). Lost in transition? Drivers and barriers in the eco-innovation road to the circular economy. *Ecological Economics*, 145, 75-89.
26. Tura, N., Hanski, J., Ahola, T., Stähle, M., Piiparinen, S., & Valkokari, K. (2019). Unlocking circular business: A framework of barriers and drivers. *Journal of Cleaner Production*, 212, 90-98.
27. Bocken, N. M., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, 42-56.
28. Stahel, W. R. (2016). The circular economy. *Nature*, 531(7595), 435-438.
29. Singh, J., Sung, K., Cooper, T., West, K., & Mont, O. (2019). Challenges and opportunities for scaling up upcycling businesses—The case of textile and wood upcycling businesses in the UK. *Resources, Conservation and Recycling*, 150, 104439.
30. Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8), 1595-1600.



31. Harris, S., Martin, M., & Diener, D. (2021). Circularity for circularity's sake? Scoping review of assessment methods for environmental performance in the circular economy. *Sustainable Production and Consumption*, 26, 172-186.
32. Geels, F. W. (2020). Micro-foundations of the multi-level perspective on socio-technical transitions: Developing a multi-dimensional model of agency through crossovers between social .... *Technological Forecasting and Social Change*.
33. Awan, U. (). Steering for sustainable development goals: a typology of sustainable innovation. *Industry*.
34. Ciasullo, M. V., Troisi, O., Grimaldi, M., & Leone, D. (2020). Multi-level governance for sustainable innovation in smart communities: an ecosystems approach. *International Entrepreneurship and Management Journal*, 16, 1167-1195.
35. Santa-Maria, T., Vermeulen, W. J., & Baumgartner, R. J. (2022). How do incumbent firms innovate their business models for the circular economy? Identifying micro-foundations of dynamic capabilities. *Business Strategy and the Environment*, 31(4), 1308-1333.
36. Audretsch, D. B., Eichler, G. M., & Schwarz, E. J. (2022). Emerging needs of social innovators and social innovation ecosystems. *International Entrepreneurship and Management Journal*, 1-38.
37. Laakso, S., Aro, R., Heiskanen, E., & Kaljonen, M. (2021). Reconfigurations in sustainability transitions: a systematic and critical review. *Sustainability: Science, Practice and Policy*, 17(1), 15-31.
38. Pinheiro, M. A. P., Jugend, D., Lopes de Sousa Jabbour, A. B., Chiappetta Jabbour, C. J., & Latan, H. (2022). Circular economy-based new products and company performance: The role of stakeholders and Industry 4.0 technologies. *Business Strategy and the Environment*, 31(1), 483-499.
39. Rejeb, A., Suhaiza, Z., Rejeb, K., Seuring, S., & Treiblmaier, H. (2022). The Internet of Things and the circular economy: A systematic literature review and research agenda. *Journal of Cleaner Production*, 350, 131439.
40. Saberi, S., Kouhizadeh, M., Sarkis, J., & Shen, L. (2019). Blockchain technology and its relationships to sustainable supply chain management. *International Journal of Production Research*, 57(7), 2117-2135.
41. Nobre, G. F., & Tavares, E. (2017). Assessing the role of big data and the internet of things on the transition to circular economy: Part II: An extension of the ReSOLVE framework proposal through a literature review. *Journal of Cleaner Production*, 142, 283-297.
42. Chauhan, C., Parida, V., & Dhir, A. (2022). Linking circular economy and digitalisation technologies: A systematic literature review of past achievements and future promises. *Technological Forecasting and Social Change*, 177, 121508.
43. Miles, I., Kastrinos, N., Flanagan, K., Bilderbeek, R., Den Hertog, P., Huntink, W., & Bouman, M. (1995). Knowledge-intensive business services: their role as users,

carriers and sources of innovation. Report to the EC DG XIII Sprint EIMS Programme, Luxembourg.

44. Bettencourt, L. A., Ostrom, A. L., Brown, S. W., & Roundtree, R. I. (2002). Client co-production in knowledge-intensive business services. *California management review*, 44(4), 100-128.
45. Miles, I. (2005). Knowledge intensive business services: prospects and policies. *foresight*, 7(6), 39-63.
46. Hertog, P. D. (2000). Knowledge-intensive business services as co-producers of innovation. *International journal of innovation management*, 4(04), 491-528.
47. Gallouj, F. (2002). *Innovation in the service economy: the new wealth of nations*. Edward Elgar Publishing.
48. Miozzo, M., & Grimshaw, D. (2005). Modularity and innovation in knowledge-intensive business services: IT outsourcing in Germany and the UK. *Research Policy*, 34(9), 1419-1439.
49. Howells, J. (2006). Intermediation and the role of intermediaries in innovation. *Research policy*, 35(5), 715-728.
50. Muller, E., & Zenker, A. (2001). Business services as actors of knowledge transformation: the role of KIBS in regional and national innovation systems. *Research policy*, 30(9), 1501-1516.
51. Tomlinson, M. (1999). The learning economy and embodied knowledge flows in Great Britain. *Journal of Evolutionary economics*, 9, 431-451.
52. Doloreux, D., & Shearmur, R. (2010). Exploring and comparing innovation patterns across different knowledge intensive business services. *Economics of Innovation and New Technology*, 19(7), 605-625.
53. Hipp, C., Tether, B. S., & Miles, I. (2000). The incidence and effects of innovation in services: evidence from Germany. *International journal of innovation management*, 4(04), 417-453.
54. Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products. *Environment: Science and Policy for Sustainable Development*, 48(5), 22-36.
55. Gordon, R., Carrigan, M., & Hastings, G. (2011). A framework for sustainable marketing. *Marketing Theory*, 11(2), 143-163.
56. Nguyen, T. N., Lobo, A., & Greenland, S. (2019). The influence of cultural values on green purchase behaviour. *Marketing Intelligence & Planning*, 37(3), 306-320.
57. Tanner, C., & Wölfig Kast, S. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology & Marketing*, 20(10), 883-902.
58. White, K., Hardisty, D. J., & Habib, R. (2019). The elusive green consumer. *Harvard Business Review*, 97(4), 124-133.

59. Bocken, N. M. P., Strupeit, L., Whalen, K., & Nußholz, J. L. K. (2019). A review and evaluation of circular business model innovation tools. *Sustainability*, 11(8), 2210.
60. Schneider, F., Kallis, G., & Martinez-Alier, J. (2017). Sustainable consumer behavior: A framework for analyzing influences and implementation. *Journal of Environmental Policy & Planning*, 19(3), 301-316.
61. Gavronski, I., Klassen, R. D., Vachon, S., & Nascimento, L. F. M. (2012). A resource-based view of green supply management. *Journal of Supply Chain Management*, 48(3), 38-55.
62. Chamorro, A., Rubio, S., & Miranda, F. J. (2009). Characteristics of research on green marketing. *Business Strategy and the Environment*, 18(4), 223-239.
63. Gadeikiene, A., Banyte, J., & Gadeikiene, D. (2021). Circular economy in marketing: A systematic review of research streams and future perspectives. *Journal of Cleaner Production*, 281, 125335.
64. Fog, K., Budtz, C., Munch, P., & Blanchette, S. (2010). *Storytelling: Branding in practice*. Springer.
65. Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3), 5-14.
66. Peattie, K., & Crane, A. (2005). Green marketing: Legend, myth, farce or prophesy? *Qualitative Market Research: An International Journal*, 8(4), 357-370.
67. Choi, T. M., & Ng, C. T. (2011). Environmental marketing strategies for fashion retailers. *Transport Research Part E: Logistics and Transport Review*, 47(6), 978-992.
68. Parsa, A., Van De Wiel, M. J., & Schmutz, U. (2021). Intersection, interrelation or interdependence? The relationship between circular economy and nexus approach. *Journal of Cleaner Production*, 313, 127794.
69. Patwa, N., Sivarajah, U., Seetharaman, A., Sarkar, S., Maiti, K., & Hingorani, K. (2021). Towards a circular economy: An emerging economies context. *Journal of business research*, 122, 725-735.
70. Rosa, P., Sassanelli, C., Urbinati, A., Chiaroni, D., & Terzi, S. (2020). Assessing relations between Circular Economy and Industry 4.0: a systematic literature review. *International Journal of Production Research*, 58(6), 1662-1687.
71. De Marchi, V. (2012). Environmental innovation and R&D cooperation: Empirical evidence from Spanish manufacturing firms. *Research policy*, 41(3), 614-623.
72. De Marchi, V., & Grandinetti, R. (2013). Knowledge strategies for environmental innovations: the case of Italian manufacturing firms. *Journal of knowledge management*, 17(4), 569-582.
73. Pace, L. A., & Miles, I. (2020). The influence of KIBS-client interactions on absorptive capacity-building for environmental innovation. *European Journal of Innovation Management*, 23(4), 553-580.

74. Castaldi, C., Faber, J., & Kishna, M. J. (2013). Co-innovation by KIBS in environmental services—A knowledge-based perspective. *International Journal of Innovation Management*, 17(05), 1350020.
75. Gotsch, M., & Hipp, C. (2012). Measurement of innovation activities in the knowledge-intensive services industry: a trademark approach. *The Service Industries Journal*, 32(13), 2167-2184.
76. Brouwers, B., & De Jong, P. (2018). The dynamics of environmental consulting firms: Knowledge, reputation, and partnerships. *Journal of Environmental Planning and Management*, 61(7), 1220-1238.
77. Mariano, J., & La Rovere, E. L. (2017). Environmental consulting firms: A critical review of their role and impact. *Environmental Science & Policy*, 77, 110-118.
78. Ortiz, O., Castells, F., & Sonnemann, G. (2009). Sustainability in the construction industry: A review of recent developments based on LCA. *Construction and Building Materials*, 23(1), 28-39.
79. Ghisetti, C., & Rennings, K. (2014). Environmental innovations and profitability: How does it pay to be green? An empirical analysis on the German innovation survey. *Journal of Cleaner Production*, 75, 106-117.
80. Miles, I. D., Belousova, V., & Chichkanov, N. (2018). Knowledge intensive business services: ambiguities and continuities. *foresight*, 20(1), 1-26.