

## **Sustainability Squared: Business Model and Entrepreneurial Framework**

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### **ABSTRACT**

General interest in sustainable development has risen notably in recent years, especially for scholars and managers. This can be seen through the growing number of papers published and by long-term objectives set by governments. The United Nations' Sustainable Development Goals (SDGs) for 2030 were established in 2015 and will serve as guidelines for entrepreneurs, CEOs and firms in all kinds of industries. The purpose of this article is twofold. First, it offers a review of the existing literature on the field of sustainability that has been identified as a rising trend among practitioners and researchers. Second, it builds an entrepreneurial framework, which revolves around the importance of product design for a firm that, in line with the SDGs, is transforming its traditional business model into a sustainable one. This framework integrates two distinct parts: (1) sustainability on a strategic level for long-term vision and for a dynamic business model, and (2) sustainability in the operational activities of the firm, such as value creation, partnerships and supply chain management. This framework might be found helpful

by both academics and managers who want to start the transition of their current company into a sustainable and resources-efficient one. Current literature is widely dominated by papers on a definitional approach for the concept of sustainability. Frameworks that focus on the early stages of implementation of these concepts are rare.

Furthermore, this paper offers an overview of the major concepts of sustainable businesses and discusses some limitations of this research. It should provide fertile grounds for future researchers.

## KEYWORDS

Circular economy; Product design; Strategic partnership; Sustainable Business Models; Sustainable supply chains; Value chain

## INTRODUCTION

The old, traditional, and non-regenerative business models are under siege. On a worldwide scale, the pressure for more sustainable businesses is rising. The social and environmental role of companies is no longer the concern of some unrealistic and over-optimistic, if not utopian theories but has become part of the equation. As sustainability is increasingly infiltrating the legal frame of societies, managers are still responding to compliance in different ways. Some are reluctant, and some are adopters. However, deciding to make the first step towards sustainability represents a strategic pivot that is often underestimated in its complexity and in its potential.

Due to the recent publication of the United Nations' 2030 Sustainable Development Goals (SDGs), firms and CEOs will face great challenges in the next decade. However, with great challenges comes great opportunities for those who will embrace them. If pressure is rising for more sustainable business, the trust people have in sustainable business has diminished. That is the reason why sustainability is being used by politics. These challenges are pushing firms out

of their comfort zone, which is a good thing, as it forces them to take into consideration issues that they were not necessarily concerned about before. This change in society will generate an effect of “natural selection” among firms who succeeded in complying and pivoting, and firms who remained in the old model. Every firm, be it a multinational or a micro company, relies on their customers, hence the importance of delivering the value they are asking for, even if this means that delivering this value does not generate direct economic returns to the organisation.

This article examines existing literature and the origin of sustainable development and corporate social responsibility, highlighting the latest trend and theories in the field. The literature points to circular economy as a promising solution to addressing the upcoming challenges with regard to controlling consumption and production from the perspective of the SDGs. Thus, this article proposes an entrepreneurial and practical framework for CEOs and managers based on the principle of regenerative or circular economy found in literature. The framework is meant to guide these leaders through the early stages of their business model evolution by establishing a chronological set of actions. This framework considers the product design as the central point to start transforming a traditional firm into a sustainable firm. Actions are identified on both a strategic and operational level. This article then concludes with a synthesis of the discussions and suggestions for the potential path for future research.

## LITERATURE REVIEW

The concept of sustainability in the fields of management and business administration seems to suffer from an ambiguous understanding due to the duality of its meanings (Glavič and Lukman, 2007). On the one hand, sustainability can represent a business’s ability to use leading practices and keep this leading position over the years. These practices can be related to competitive advantage (Dierickx and Cool, 1989), growth (Higgins, 1981), or business and innovation (Teece, 2010). On the other hand, sustainability can be related to pro-environment and/or pro-social strategies. This definition is often used when it comes to development (Hopwood et al.,

2005), policies (De Smedt, 2010) and corporate responsibilities (Garriga and Melé, 2004). It is important to highlight that both above-mentioned theories of sustainability are non-exclusive. As a matter of fact, the sustainable development of a firm in its environmental and socio-economic sense can contribute to its sustainable development in terms of competitiveness and growth (Kettinger et al., 1994). That is the reason why this article uses the concept of sustainability related to the firm's responsibility towards its environmental and social ecosystems, which is not in opposition to achieving the goals of the first definition.

The concern firms and scholars have about sustainability and corporate responsibility is not a recent topic. The first theories about interactions between companies, governments, people and environment were established during the 1900s. During these years, researchers defined the firm as part of a system which consequently must have social responsibilities (Coase, 1937), while others analysed the fundamental and rational objectives of a company's existence (Friedman, 1970). In the early 80s, right after thirty years of economic recovery, researchers began to have a broader approach to corporate responsibilities and interest in stakeholders' management strategies started to rise (Freeman and Reed, 1983). In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was signed and extended in 1997 by the Kyoto protocol. These events, together with the arrival of the high-speed internet and digital transformation, marked the beginning of a new interest in sustainable businesses and called for more responsible companies (Bond et al., 2012; Freedman and Jaggi, 2005). Since then, many firms among the signatory countries have been trying to modify their approach to doing business in many ways. As there are various options when thinking about a sustainable business, some have focused on a supply chain transformation (Linton et al., 2007) while others have turned their attention towards strategic partnerships (Lozano, 2015).

Some managers might have perceived this recent interest in responsibilities concerning the limited resources of our planet as simply a trend. However, nowadays, it has proved to be more

than a passing fashion, but is a new paradigm that could reframe the economic and managerial world (Gladwin et al., 1995). This is confirmed by recent decisions of many countries to get rid of nuclear energy in the mid-term (Bretschger and Lin Zhang, 2017) and by the United Nations' new Sustainable Development Goals (SDGs) adopted in 2015. These SDGs were established to transform our society and our values, especially the way we produce, purchase, use and reuse goods of all kinds. Society, here, is understood as a large gathering of human structures, including governments, citizens, firms and all kinds of organisations. It is not necessarily limited to a country or a region. SDGs are long-term objectives that everyone is allowed to contribute to. While individuals can have a direct impact on their contribution, firms have to take measures that will affect their business in different ways, depending on how far they are ready to go to comply (Roberts, 1992). These measures are the CSR.

Before going further in this study, light must be shed on what sustainable development is within the context of a firm. It is widely accepted among practitioners and scholars that sustainability regroups three major dimensions that firms should integrate in their vision. These theories are primarily known as the "triple bottom line" and suggests that firms have to meet social and environmental objectives in addition to their economic growth (Elkington, 1998). The literature doesn't have full agreement on a single and finished definition of the CSR (Matten and Moon, 2008). Instead, it opens several paths to understanding the scope of CSR (Carroll, 1999). Thus, this study considers CSR to be part of corporate sustainability and concerns all the actions that a firm intentionally takes to have a positive impact on a social or environmental level. However, if being sustainable implies having corporate social responsibilities, the reverse is not necessarily true. This could be the case for firms that have chosen to address certain issues, social or environmental, without taking into consideration the long-term consequences of their short-term actions (Bansal and DesJardine, 2014). These short-term actions are often not made

fully willingly by managers but are rather an attempt to try to satisfy superficial expectations of the customers. This method is also called “greenwashing” (Parguel et al., 2011).

A well-known definition of sustainable development is: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1985). According to this definition, this paper suggests that sustainable development is not a strategy, but a goal that must be reached by human society. That is where CSR comes into play. It represents the actions that firms will take in order to reach this goal. It is a fact that alone they cannot succeed in attaining their goal of sustainable development for the whole society (Nidumolu et al., 2009), but can definitely reach a similar goal on their own level (Nidumolu et al., 2009).

As sustainability for society is a general, long-term destination, the strategies to reach it are manifold. Literature has identified a solution to avoiding consumption on credit by jeopardising tomorrow’s resources. This is called “a circular economy” (Geissdoerfer et al., 2017). This theory describes an economic system that can be adapted to a firm at different levels, such as with supply chain management. A circular economy is a concept that was first defined in 1990 (Pearce and Turner, 1990) but has never received a lot of attention from scholars or managers until recently (Geissdoerfer et al., 2017). This article recognises the following definition of a circular economy: “an industrial economy that is restorative or regenerative by intention and design” (MacArthur, 2013), which implies a notion of closed-loop economy. The reason that this concept has gained in popularity over the last couple of years is because of rising pressure around limited resources generated by the planet earth: hence the need for a regenerative (Geissdoerfer et al., 2017) or a cradle-to-cradle business approach (McDonough and Braungart, 2010).

Wanting to implement the principal of a circular economy in an organisation is often synonymous with undergoing a total transformation of the current business model (Lüdeke-

Freund et al., 2018). This could be particularly discouraging for managers as they would not know where to start this transformation. Probably their first reaction would be fear of rising costs and loss of profitability (McWilliams and Siegel, 2000; Vries et al., 2015). However, it has been proven that sustainable development and, by extension, a circular, economy-based strategy can result not only in a greater economic performance (Eccles et al., 2014) but it can also give the organisation a first-mover position and a solid long-term competitive advantage (Reed and Defillippi, 1990).

Furthermore, the discussed concepts imply a long-term vision, be it for society in general or for companies. Literature has already revealed the importance of long-term strategies when it comes to economic profit (Kaplan and Norton, 1996). It appears that the same principle also applies to sustainable development (Bansal and DesJardine, 2014). As a matter of fact, short-termism in strategy management is competing against sustainable values and therefore should be counterbalanced by strong long-term vision and mid-term actions on both managerial and operational levels (Bansal and DesJardine, 2014). In fact, CSR and business sustainability are often confused, according to Bansal and DesJardine (2014). The difference is that firms have a much shorter time scope than society. When society thinks about sustainability, it is with a scope of twenty or maybe fifty years, while four out of five managers abandon the long-term strategy to focus on short-term targets and objectives (Graham et al., 2005). This happens mostly because of pressure to achieve relative economic growth and less attention is put on social and environmental goals. Indeed, Graham (2014) revealed that managers tend to make voluntary disclosure to reduce the information risk and boost the stock price, which then obliges them to take short-term action to match with the disclosure. In order for managers to have a better understanding of how to implement sustainability and CSR, researchers have built several tools that might help provide a practical approach. The CSRs have been detailed and hierarchised in four levels considering economic prosperity as the base of the pyramid on which

lie legal responsibilities, before ethics and philanthropic actions (Carroll, 1991). More recently, as sustainability has become a stand-alone strategic field (Patterson et al., 2017), some scholars have based their research on linking a sustainable framework directly to the business model. One interesting approach uses the “triple bottom line” discussed above (Elkington, 1998) and the business model canvas (Osterwalder and Pigneur, 2010) to build a triple-layered canvas (Joyce and Paquin, 2016). This approach is important for this article because it highlights the fact that firms are capable of creating not only economic value, but also social and environmental value. In fact, as part of a system, customers and other stakeholders are increasingly asking for sustainable products and firms that have a social and environmental consciousness (Tanner and Kast, 2003).

Previously in this article it was mentioned that firms could not achieve society’s sustainable development goals on their own. Societal objectives require a concerted reaction. That is why in their quest for a sustainable transformation, firms might consider that building strategic partnerships could help them to pivot to their new form (Matten and Moon, 2008). Partnerships can be made with a large range of stakeholders, and should not be limited to the suppliers of products or services (Hörisch et al., 2014). Historically, managers’ and companies’ only strategies towards stakeholders were largely hierarchising the stakeholders, putting the stockholders and other shareholders at the top of the pyramid (Su et al., 2007). This approach is losing popularity among professionals and scholars because of its too narrow scope of value creation and value delivery (Lüdeke-Freund et al., 2016). As a matter of fact, a large spectrum of stakeholders has been identified, the reason that the shareholder is king is no longer relevant (Jones, 1995). Indeed, shareholders’ interest is mostly financial because the return on investment is the main reason why they invested their money in the first place (Lüdeke-Freund et al., 2016). But as other stakeholders, customers, partners or communities are asking companies to take on these social and environmental responsibilities, they can no longer satisfy



only their shareholders (Bansal and Roth, 2000). Jones (1995) also points out that there might exist a kind of prisoner's dilemma among stakeholders because there is no trust among them and they are driven solely by their own self-interest. Trust should be rebuilt among stakeholders in order to have synergies (Reed and Defillippi, 1990). Other approaches suggest that the definition of stakeholders shouldn't be limited to traditional shareholders, customers, and partners, but should also include nature, environment and territorial capital (Starik, 1995; Stubbs and Cocklin, 2008). A broad acceptance of stakeholders is critical to enable managers to find solutions where they previously saw obstacles. This will allow collaboration among companies, governments and stakeholders to be reinforced (Barnett et al., 2018), as well as among the stakeholders themselves.

In addition, sustainable development is changing from a "nice to have" to a "must have". In order to achieve the SDGs, everybody has a role to play and firms have the opportunity to comply and innovate. Managers that have seen the potential for their company to develop a social and environmental strategy might be deeply interested in the principle of the circular economy and its fertile grounds for innovation. A manager wanting to make his firm sustainable could think that a proper stakeholder strategy may also contribute to achieving greater profitability as well as a solid position on the market. Alternatively, he could also think that corporate social responsibilities are a good way for a firm to make the first step towards contributing to a better world. However, the first barrier that the motivated manager meets is the high costs and the sensation of not knowing where to start (Reed and Defillippi, 1990).

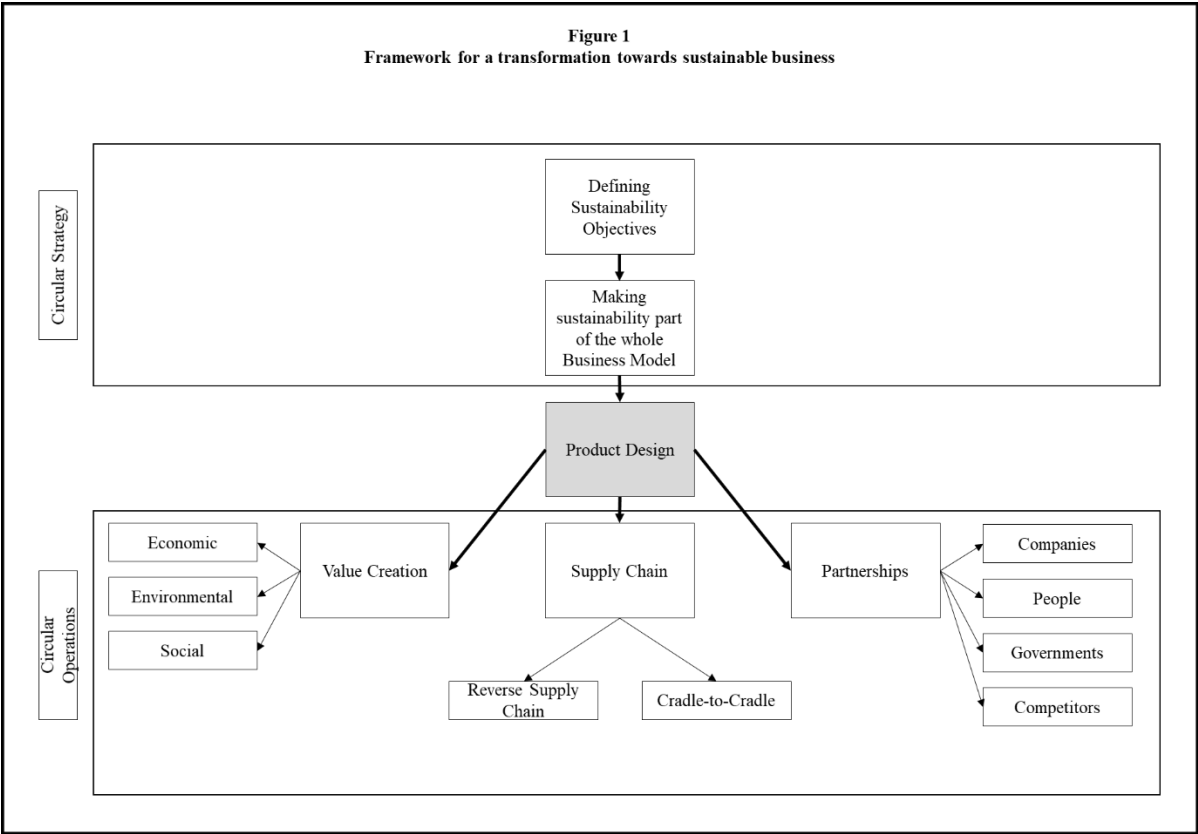
## ENTREPRENEURIAL FRAMEWORK

In this section we present the challenge managers may encounter when wanting to implement sustainable business activities. Between the countless opportunities to develop CSR (Vries et al., 2015), legislation (Schaltegger et al., 2012) and the pressure from customers to have more sustainable products (Bansal and Roth, 2000), it is hard to know what should be done first and

how to turn theories into actions. In this section, this article establishes a framework, based on the literature, of what managers could do to start their journey towards a sustainable business.

During the next decade, firms are expected to feel external pressure because of the growing trend of sustainable development and the new SDGs. Firms who identified an opportunity for being the early-bird movers may have to start by rethinking the long-term strategy. The framework established in this article suggests that the product design stands in the centre of the business model evolution and that actions should be taken on two different levels. In fact, business models evolve through the implementation of circular principles on a strategic level first, and then on the operational level. In the next paragraphs, it is detailed how such evolution can be achieved through product redesign and what actions can be undertaken in value creation and delivery, in the supply chain, and in terms of strategic partnerships.

Figure 1 below displays the framework for a transformation towards sustainable business established through the literature review. This figure is explained in the next paragraphs.



*Defining objectives:* The first step takes place at a strategic level. It consists of identifying where the main sources of social and environmental costs are, i.e. the area of a business with the worst consequences on the external environment (Lewandowski, 2016). Once identified, the managers must define what kind of transformation could have the most value for them (Boons and Lüdeke-Freund, 2013). In order to have a solid social and environmental impact, managers should analyse the value chain all the way, even after the product is used and thrown away. By doing so, they will have a better view of where opportunities for improvements are. A good tool for that is the “triple-layered business model canvas” (Joyce and Paquin, 2016). The important guideline, when thinking about this strategy, is to keep in mind that the maximal sustainable value will be delivered when the social, environmental and economic interests are all met in an optimal way (Carter and Rogers, 2008). Principles of circular economy have been identified as being perfectly adapted to provide this kind of coherence between the three pillars and are also coherent with the long-term strategy that is required for sustainable businesses (Bansal and DesJardine, 2014). Depending on the industries, firms will meet relatively high barriers to implementing a closed-loop model, but this should not prevent them from operating this transformation. Costs are often a short term constraint which will turn into profits in the long-run (Vries et al., 2015). It is not because the loop cannot be completely closed in the short-term that managers should be discouraged (Geissdoerfer et al., 2017).

*Business Model:* The next step in our framework is to adapt the business model strategy (Schaltegger et al., 2012) and communicate the new direction to every member of the company, and even all the stakeholders (Barnett et al., 2018). This will allow the internal and external actors to understand where the boat is heading, which will have good consequences on the firm by attracting new talent, investors and partners that will match the new values of the firm and help it to better deliver its future value (Gao and Bansal, 2013). Business model strategy implies a dynamic approach, which implies that the business model is constantly being rethought,

adjusted and reviewed (Mitchell and Coles, 2003). This point seems to be evidence but many firms have only a vague idea of what their business model is and this is locked in the top management offices (Gibson, 2006). Transparency is a key factor for sustainable development, be it inside or outside the company. When redesigning the business models, managers will have to think out of the box and challenge orthodoxies in order to generate a higher value (Hamel, 2008). This will be explained later in this article. When doing so, three aspects of the business model should be put under the microscope: the value creation (Porter and Kramer, 2018), partnerships (Elkington, 1998) and the supply chain (Linton et al., 2007).

*Product Design:* Our observation is that product design is the central element on which sustainable development depends. That is why it is in the middle of our framework, in-between strategy and operations. There are several ways that a product can be redesigned to facilitate sustainability. Some firms in specific industries might have the opportunity to design a product that can be built from exclusively sustainable and renewable materials (Baldassarre et al., 2017). These firms can concentrate their efforts on designing a completely recyclable product or a product that has a controlled impact on the environment during its whole cycle of production (Lewandowski, 2016). However, other firms in other industries, like, for example, the cell phone industry, might not be able to do that because they are using rare materials that require high energy to produce and that have a very low potential for recycling. These firms could start redesigning the products in order to extend their life cycle (Finkbeiner et al., 2010). Extending the life cycle of a product can appear to be costly at first sight because fewer products will be sold to customers over a given period. However, the customer might see a greater value in long-lasting products, possibly resulting in fewer purchases but more customers. When a new product is designed, or redesigned, the next element to look at is to see how this product will be integrated into the existing supply chain.

*Value Creation:* In many firms, value creation is often hierarchised among the value for shareholders, the profit for the firm and the value delivered to the customer, which generally comes last (Freeman and Reed, 1983). Reframing the value creation seems to be a good place to start redesigning the business model. In order to do that, managers can consider the traditional economic value, but they can also extend to the two other pillars of sustainability (Finkbeiner et al., 2010). The environmental value is defined by Joyce & Paquin (2016) as a functional value which takes into account the life cycle assessment of the product (Joyce and Paquin, 2016). They established the functional value of a product as related to a period (the number of products used by the customer in a defined period). This is the functional value found in their environmental canvas. While in their social canvas, they consider the value created for the stakeholders and how it is linked to the mission of the company. Following this approach will guide managers and stakeholders to identify the benefit to everyone in the new strategic orientation.

*Partnerships:* Once the future value creation is defined, the next step is about reconsidering who will be the best partner in order to reach the goals (Jones, 1995). Here again, thinking out of the box might be the promise of great opportunities. Some scholars have identified three major actors as potential partners: companies, people and governments (Barnett et al., 2018; Gold et al., 2010). These partnerships can be generating synergies and should therefore be evaluated by managers. However, managers always underestimate another partner, mostly because it is not the most obvious: the competitor (Tsai, 2002). Indeed, as stated by Tsai (2002), cooptation is an underestimated way to develop synergies, cross-absorb competences and develop top products. Turning a competitor into a partner is not an easy task because it requires broadening the perspectives of the business as it has been perceived so far (Elkington, 1998). By extension, cooptation can be perceived as a way to have synergies, but from social and environmental perspectives as well. Elkington (1998) also mentioned that the accent when

building a new partnership should be put on gaining trust from the partners. This could be gained through loyalty. When building a relationship with a partner, loyalty will be challenged, which can generate synergies that might have a positive impact on relations with the competitor. Partnerships are built around the products, which means that firms considering partnerships must think first about partnerships in the value creation process. It is important to highlight that CSR and partnerships around the product are not separate topics. In fact, they are complementary. Products, built with the appropriate partners and designed accordingly using sustainable processes, will automatically deliver social and environmental value.

*Supply Chains:* The idea behind redesigning the product based on sustainable principles is to try to have a closed-loop of production. But not only. A closed loop suggests that the value chain doesn't stop when the product is sold to the client (Genovese et al., 2017). A closed-loop supply chain takes into account the operation after the delivery to the customer. It integrates the whole process of recycling and reusing or disassembling in order for the materials to be available again in their raw form. The process of recycling and reusing is known as the "reverse supply chain" (Genovese et al., 2017) and describes how a product or waste, generated during the production process, could be recycled and reinjected at different stages of the supply chain in order to be reintegrated with other products. Similarly, the cradle-to-cradle approach suggests that a product should be designed in order for it to be completely disassembled and its components to be reusable in the form they were before production (McDonough and Braungart, 2010). Here again, some firms might not be able to integrate a completely circular supply chain, but the idea is to try to close it as well as possible. Partnerships are also to be included in this attempt, especially for waste reuse. These different approaches present strong sustainable characteristics that can become a valuable competitive advantage in tomorrow's world (Gold et al., 2010).

Regenerative business models and supply chains built around specifically designed products should be at the centre of managers' attention for the next decade as it is certainly a unique strategy to achieve higher sustainability and contribute to the SDGs.

## CONCLUSION

This paper contributes to existing research on sustainable business models by reviewing the literature and by providing a framework for starting the transformation towards a sustainable business model. This framework integrates product design at its centre and suggests that, in order to take the first steps towards circular and sustainable business models, the product should be the key to the transformation. This framework broadens the spectrum of company objectives by considering that they have social and environmental responsibilities that should be reflected not only by their external actions, but most importantly, by their product design. Therefore, partnerships, supply-chain and the whole value creation needs to be rethought.

Managers who want not only to comply with the new legislation for sustainability, but also to go well beyond and become market leaders of tomorrow, can therefore rely on this framework to have an idea of the key principles that should guide their actions and their strategic thinking. As mentioned previously, this entrepreneurial framework serves as a basis for the early stages of the transformation and should therefore be adapted for the specific context of every firm.

While this paper has covered circular economic principles based on the literature review and built a framework upon it, there are some limitations to consider that could represent future avenues for research. First, it focuses only on the early stage of the transformation process, which means that the approach to the second-step has been completely left aside. Future researchers might want to investigate how to manage this kind of transformation in the long run. It could also be valuable to investigate the role of continuous innovation in this kind of context. In addition, this study is built on a generic approach, which means that it makes no

distinctions between firms and industries. Adapting this framework to a specific industry or country could be helpful for both scholars and managers. Finally, action-research based on these theories could help to prove the value and coherence of the theories used in this paper and help to refine the framework model. This framework could therefore serve as support for those who want to transform their company into an evolved form.



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