

Circular Economy in the Fashion Industry: turning waste into resources

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Dissertation written under the supervision of Professor Tommaso
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Dissertation submitted in partial fulfilment of requirements for the MSc in
International Management, at Universidade Católica Portuguesa and for the MSc
in Economics and Management of Innovation and Technology, at Bocconi
University, 04/09/2018.

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O objetivo desta tese consiste em investigar como as empresas de moda podem redefinir os processos produtivos delas, ao fim de aplicar a Economia Circular para reduzir a produção de resíduos.

Um enquadramento teórico mostra as características mais relevantes da Responsabilidade Social das Empresas e as razões subjacentes a necessidade de um business com base na circularidade.

Seis exemplos de empresas virtuosas no cenário italiano, diversas em tamanho, legado e âmbito de aplicação, mas que partilham um interesse comum na sustentabilidade, revelam como superar o sistema linear tradicional em todas as partes da cadeia de valor.

Os atores industriais fornecem um esquema claro de como a Economia Circular pode ser integrada nos modelos de gestão e consegue desafiar o sistema industrial atual.

O comportamento irresponsável retratado pelas empresas focadas unicamente em incrementar as vendas e em cortar as despesas, e os consumidores que desperdiçam os recursos estão a causar consequências graves pelo ambiente e pela sociedade.

Mais do que algumas tentativas foram feitas para ultrapassar o sistema linear e alcançar atividades totalmente sustentáveis, mas os investimentos necessários em matéria de dinheiro, tempo ou estruturas organizativas não estão ao alcance de todos.

Por causa do crescimento demográfico previsto, uma gestão hábil do desperdício será imprescindível para evitar a acumulação dos resíduos e recuperar inputs valiosos.

Mediante a aplicação de uma visão a longo prazo para novos processos produtivos, o atual nível de riqueza e bem-estar poderá ser mantido.

O que é preciso criar para resolver a escassez de recursos é uma rede de empresas sustentáveis – fornecedores, produtores e comerciantes – que podem aplicar eficazmente a Economia Circular a todos os níveis da cadeia do valor.

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The purpose of this thesis is to investigate how fashion companies may reshape their productive processes to embrace Circular Economy to drastically reduce waste generation.

A theoretical framework outlines the most relevant features of Corporate Social Responsibility and the reasoning behind the need for a business based on circularity.

Six virtuous examples in the Italian landscape – different in size, heritage and scopes, but sharing a common interest in sustainability – show how to overcome the traditional linear systems throughout the value chain. The players provide a clear scheme of how Circular Economy shall be integrated in business models and may challenge the current industrial pattern.

The reckless attitude portrayed by companies focused solely on pushing sales and cutting down costs, and consumers devoted to the devouring of resources are causing severe consequences on the environment and the society.

More than few attempts have been made to overcome the linear approach and to achieve completely sustainable businesses, but the investments needed – in terms of money, time or organisational structures – are not within the reach of every player.

With the foreseen increase in population, a clever waste management will be imperative to avoid the accumulation of garbage and to recover valuable inputs.

By applying a long-term vision towards new productive processes, the current standards of wealth and well-being can be maintained.

What is needed to solve the resource scarcity is the creation of a network of sustainable firms – suppliers, producers, retailers – able to master Circular Economy at every level of the value chain.

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Introduction

Fashion companies are characterised by an extremely negative impact on the environment, which is eventually causing great direct and indirect harm to people and consumers.

Scraps are inevitably generated throughout the manufacturing process and they are hardly ever reused, recycled or even correctly disposed of.

All the processes require an incredibly high amount of resources and energy usage, mostly deriving from unsustainable and non-renewable sources, producing, in the most extreme cases, fully-fledged environmental disasters.

On top of that, the changing patterns in consumer behaviour occurred during the last 15 years have worsen the matter, leading to an unprecedented level of consumption and to the drastic decline in the life-cycle of items.

The aim of this research is to understand how fashion firms may redesign their productive processes and their value chain in order to reduce waste generation.

In the first chapter (*Literature Review*) an extensive overview of the existing literature is provided, as to set a strong theoretical framework to sustain the analysis.

The investigation of the concept of Corporate Social Responsibility, thanks to the inquiry of its relevance in modern economies, its academic bases and the role covered by legislation in sustaining its application, sets the ground for understanding the evolution of the idea of Shared Value and the elaboration of an integrative approach for sustainability.

Afterward, the notions of Linear and Circular Economy are outlined, and a new series of business models based on circularity are defined.

Eventually, the reasons behind the choice of fashion industry as target are explained.

The second chapter (*Methodology*) is dedicated to the definition of the mode of analysis.

A qualitative and descriptive investigation has been portrayed, and the procedures in selecting the targets, collecting and interpreting the data are provided.

The last section of the work (*Context & Analysis*) is devoted to the accurate description of six virtuous examples of sustainability and Circular Economy integration within existing fashion companies' business models.

The selected firms are Salvatore Ferragamo and OrangeFiber, WRAD, Prada, VIC – Very Important Choice and Progetto QUID.

The entire value creation process is taken into consideration, with the aim of highlighting which are the most relevant strategies applied at each step of the value chain, and how they have been successfully enforced.

By presenting a transparent analysis of specific empirical cases, a clearer view on the establishment of sustainable practices in the real world is offered.

The thesis ends with some final considerations on the importance of Circular Economy in decreasing the environmental and social negative externalities caused by fashion firms. The impact, the limits and some possible further developments are presented.

It is crucial that companies understand the necessity to go beyond the current linear approach, as it is the sole way to achieve a fair and truly sustainable future.

Chapter 1 – *Literature Review*

1.1 Corporate Social Responsibility

1.1.1 The Relevance of Corporate Sustainability in Modern Economies

A strong call for responsibility started a few decades ago, as a direct consequence of a «substandard management of environmental issues» in Western countries' economic activities (Hens, et al., 2017).

As early as 1987, the report “Our Common Future” – also known as “Brundtland Report”, by the name of the Chairperson in charge, Gro Harlem Brundtland – was developed by the WCDE (World Commission on Environment and Development).

Its aim was to gather and address the different problems that an irresponsible exploitation of resources and surroundings had caused in the previous years.

The commission drew that «the major environmental problems were a consequence of poverty in one part of the world and unsustainable consumption and production in the other» (Hens, et al., 2017), and described, for the first time, the concept of “sustainable development”.

According to this view, the satisfaction of today's needs and urges shall not come at the cost of next generations' opportunities, and an «international economic system of co-operation», based on a brand-new set of technologies and social structures, is required to achieve a «new era of economic growth» (Brundtland, 1987).

It was highlighted also the necessity of an improvement in «[ameliorating] environmental quality, safeguarding biodiversity and protecting human and ecosystem health» (Hens, et al., 2017), in order to counteract the scourge of poverty and assure «the basic needs of all [people]» and the «opportunity to fulfil their aspirations for a better life» (Brundtland, 1987).

This achievement is attainable by pursuing the three pillars of sustainability, i.e. «economic viability, protection of the environment and social and ethical acceptance» (Hens, et al., 2017).

The increase of awareness towards environmental and social issues, as well as the drive for change suggested by the institutions, have forced companies relating to a variety of industries to rethink their business actions in a more prudent perspective. Firms are required to «view corporate sustainability as a strategic issue», and therefore to proactively engage in responsible

practises rather than restricting their scope to «greenwashing and other avoidance tactics» (Lampikoski, et al., 2014).

More specifically, top managers shall point out a strong commitment in the integration of environmental principles in their companies' business strategies and operations, allowing at the same time the drastic reduction of social and ecological drawbacks of production and consumption (Lampikoski, et al., 2014).

According to Lampikoski et al. (2014), several advantages, besides any ethical and moral motivations, can be found in the pursuance of corporate sustainability activities. These benefits are related to a wide range of stages in the economic exercise.

From a human resource management perspective, sustainable companies have more chances to recruit top talent candidates (Lampikoski, et al., 2014), and a strong commitment to internal Corporate Social Responsibility practices have proven to make a difference in employees' turnover intentions (Low, et al., 2017) and in the improvement of productivity (Lampikoski, et al., 2014).

Moreover, the development of eco-efficient habits, such as reducing the overall level of pollution, energy and water consumption can lead to a relevant decrease of manufacturing and commercial costs, as well as to a shield against «widening ethical and environmental corporate scandals» (Lampikoski, et al., 2014).

Nonetheless, most firms are not yet able to extract enough value and benefits from their CSR activities.

This gap is due to a lack of «revolutionary green innovations» able not only to improve existing products and processes, but also to dramatically reshape the productivity landscape (Lampikoski, et al., 2014).

The difference between a green and a generic innovation lies in the impact it has on the company's environmental footprint (Lampikoski, et al., 2014).

Its ultimate objective is to boost «competitiveness while maintaining the environment and conserving its valuable resources for future generations» (Lampikoski, et al., 2014).

However, this is not limited to the internal activities of the firm – production processes, technologies, marketing techniques, managerial and organisational frameworks – but it encompasses «innovations in social and institutional structures» as well (Lampikoski, et al., 2014).

Company leaders should therefore align their objectives to a sustainable path and instil responsible activities in the corporate culture.

In this way they would be able to transform their CSR actions into a true competitive advantage integrated in the strategy, in order to create and capture as much value as possible.

1.1.2 A Theoretical Framework for CSR Policies

At the present time, there is not a clear definition of Corporate Social Responsibility, as it entails a complex nature and a composite context of problems (Reinhardt, et al., 2008).

A variety of theories exists in order to address different approaches and terminologies used to define the same, broad concept.

The attitude of firms towards the implementation of CSR has changed over the recent years and along with the increasing awareness of social and environmental impact of modern economies. Garriga & Melé (2004) propose a classification of CSR theories based on four aspects occurring in any social system: economics, politics, social integration and ethics.

In the first group of doctrines, known as “Instrumental Theories”, CSR is seen as a simple mean to increase profitability.

This approach stands in line with Friedman’s perspective on rights and obligations of companies, according to which the sole responsibility of business is to «use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud» (Friedman, 1970).

In this case, firms might consider undertaking CSR activities only if they contribute to the boost of wealth, irrespectively from the impact they may have on other stakeholders.

Nonetheless, it has been proved that, under certain conditions, a correlation between investments in CSR and profits do exist.

For this reason, it is possible to divide the instrumental theories into three categories, depending on the economic objectives entailed – maximisation of shareholder value, achievement of a competitive advantage, cause-related marketing – and the time frame involved (Garriga & Melé, 2004).

In the first case, the objective is to maximise the stock price, regardless from possible social requests. In fact, Garriga & Melé underline that «any investment [...] that would produce an increase of the shareholder value should be made», while if external pressure «only imposes a cost on the company they should be rejected».

Nonetheless, nowadays there is a general agreement upon the harmonisation of shareholders' objectives and other stakeholders' aims. In case of trade-off among corporate constituencies, managers should set the long-term profit increment as the objective, in the deployment of an "enlightened value maximisation" (Jensen, 2001).

Secondly, CSR investments can be made to ensure an advancement in the competitive advantage, as social and ethical resources and capabilities may have the power to enhance and perfect the decision-making process and the relationship among primary interlocutors, such as employees, suppliers and clients.

Furthermore, pursuing CSR strategies may help address a greater portion of the customer base: usually firms tend to dialogue with upper and middle-class customers, leaving behind a great slice of the market. By investing to ameliorate social condition, companies could gain new customers for their businesses, and, at the same time, leveraging their new association with a clean and reliable approach for cause-related marketing activities. In fact, customers tend to link honest or green firms with higher quality product, increasing their willingness to buy and to pay (Garriga & Melé, 2004).

The concepts belonging to the second group are defined "Political Theories".

They refer to an approach focused on «interaction and connections between business and society and on the power and position of business and its inherent responsibility» (Garriga & Melé, 2004), and they can be distinguished into Corporate Constitutionalism and Corporate Citizenship.

The first definition concerns the existence of «values and ideas in [...] public political life that provide useful insights when considering the legal regulation of corporate governance and decision-making» (Corbett & Spender, 2009).

According to this view, contracts and agreements are no longer the source of legitimacy of a company, but they shall be replaced by constitution.

The locus of social power of firms is not exclusively depending on internal processes, but it is «unstable and constantly shifting, from the economic to the social forum and from there to the political forum and vice versa» (Garriga & Melé, 2004).

The idea of Corporate Citizenship, on the other hand, has been introduced as a mean to strengthen the tie among gigantic and multinational companies and civil society, by entailing «a strong sense of business responsibility towards the local community, partnerships, which are the specific ways of formalizing the willingness to improve the local community, and for consideration for the environment» (Garriga & Melé, 2004).

“Integrating Theories” analyse the relationship between business and society, assessing the existence of a tie bond among firms’ success and the demands of civil society.

This link takes shape in the integration of business’ needs and social value, in order to guarantee the achievement of «social legitimacy, greater social acceptance and prestige» (Garriga & Melé, 2004).

Garriga & Melé further deepen the reasoning and defines four types of actions that companies may engage in to strengthen their contact with society: issue management, public responsibility, stakeholder management and corporate social performance.

Issue management is the careful monitor and response to any possible misalignment existing between the firm performance and the expectations of the community.

A company must be ready to react effectively to any unexpected result or emerging conflict that could have a negative impact on activities, as well as to build a reputable and trustworthy image towards external players.

Public responsibility is represented both by the adherence to laws, regulations and public policies – having in mind the public process, rather than personal moral perspectives – and by the compliance with public opinion and sentiment in the community.

Stakeholder management represents a step ahead of the utilitarian exchanges usually pursued by companies, involving «a proactive attitude in considering a wide range of actors, even those who at first sight may seem less crucial for the company as they are not directly in its economic activities» (Rinaldi & Testa, 2014, p. 21).

The identification of the figures that usually carry the interest of a firm is related to the three main aspects of Corporate Social Responsibility (Rinaldi & Testa, 2014, p. 21):

- An economic dimension, meaning actors connected with profits and wealth generation
- A social dimension, considering people directly or indirectly affected by the company’s activities
- An environmental dimension, which takes care of the pollution and waste produced by the firm

Finally, the corporate social performance approach «includes a search for social legitimacy, with processes for giving appropriate responses» (Garriga & Melé, 2004).

It implies the application of the aforementioned concepts – issue management, public responsibility, stakeholder management – in order to define what social responsibility means, which areas and scopes it entails and how to respond properly to any emerging problem.

The fourth group of theories presented (“Ethical Theories”) refers to the imperative principles on which every virtuous society lies, such as universal labour and human rights, sustainable development and common good approach.

According to these propositions, the only way to achieve a long-term profitability is to incorporate environmental and social dimensions (i.e. ecological balance and social justice) in the managerial strategy, primarily aiming at generating wealth (Rinaldi & Testa, 2014, p. 22).

1.1.3 The Evolution of Social Responsibility into Shared Value

The concept of Corporate Social Responsibility has significantly changed along with the shifts in business’ purposes. From a mere assisting tool, it has become a priority in the organisation of firms.

Nonetheless, CSR is not a stand-alone theory, but it shall be included into a wider scheme, that encompasses the primal concept of Cleaner Production and the developments of Corporate Social Value in order to eventually create a value chain that is fully integrated with the principles of sustainability.

Hens, et al. (2017) describe Cleaner Production as an exhaustive strategy – entailing more than just technical issues and isolated audit – that aims at reducing the amount of waste and emissions mainly generated by industrial activities.

Its focus is on prevention, meaning that any hazardous action should be hindered upstream, and on integration, suggesting an emphasis on the whole value chain processes.

The continuity of efforts is stressed: only by repeatedly revising each step it is possible to reach the ultimate goal, which is finding «a technology that produced no pollution at all» (Hens, et al., 2017).

The spotlight of Cleaner Production has always been the safeguarding of natural resources. Nevertheless, during the past decades, more and more recognition has been given to the two other dimensions capable of influencing the society’s well-being: social sustainability and economic effectiveness.

According to Hens, et al. (2017), the former provides for «human development and social enhancement through minimisation of risks to people and community» achievable, for instance, through the creation of job positions and the defence of workers and local communities.

The latter, on the other hand, envisages the boost of «production efficiency and economic performance through improved productive use of natural resources [...] at all stages of the production cycle» (Hens, et al., 2017).

The natural evolution of Cleaner Production techniques is the development, within the firm, of a series of policies surpassing the legal requirements – often inadequate and belated – and proposing «a more proactive attitude [...] on environmental impacts» (Hens, et al., 2017).

As power shifts «from business and governments to media and social operators/commentators [...] these are now strongly advocating a reassessment of key business drivers and values» (McIntosh, et al., 2017).

In accordance with the need of companies to maximise the total stakeholder value, CSR should end up representing a «social value enhancing vehicle» in the re-designed strategic purpose of the company (McIntosh, et al., 2017).

Nonetheless, the sole CSR activities are not sufficient alone, because their objective is generally a counteraction to existing issues. Furthermore, the incorporation of CSR practises within a firm's activities represent a threat from an economical perspective, inducing companies to exclude pro-social actions as a consequence of their negative effect on short-term results (Wójcik, 2016).

A further step to undertake in order to boost growth for both business and society is the creation of shared value, intended as the result of the successful interaction of societal and economic dimensions.

By addressing the need of the entire pool of stakeholders, firms shall be able to pursue their strategic goals and generate extra profits while complying with the triple bottom line requirements – social, environmental and economic dimensions (McIntosh, et al., 2017).

In this way, CSR founding principles are respected, but a new outlook is adopted, through which «value [is] created by and for a company as well as its stakeholders simultaneously» (Wójcik, 2016).

Corporate Shared Value represents a crucial step ahead in business responsibility, as it considers «both a firm's performance and social concerns from the value creation perspective, a phenomenon that constitutes a central point in economics and management» (Wójcik, 2016). Indeed, CSV has the ability to re-invent products and markets, thanks to its influence on value chain productivity processes, and in building «supportive industry clusters» (McIntosh, et al., 2017).

The same authors also report that «CSV supersedes CSR because philanthropy is driven by external pressure which focuses on the company's reputation while CSV's purpose is to bring economic and societal benefits relative to cost [...] with a concomitant approach to community

value creation». Its ultimate objective is therefore the creation of new opportunities for growth and success, and this is made possible through an inner motivational effort rather than an external imposition (Wójcik, 2016).

In the attempt to find a global definition of CSV, it shall be seen as a «progressive evolution to the social pillar of sustainability». Its advantage lays in its ability to endeavour «a proactive approach to business improvement», as to maximise both stakeholder and value chain returns (McIntosh, et al., 2017).

It leads to a Pareto-efficient allocation of resources, that is to say reaching an increase in one of the parties' well-being without causing any harm to the others (Wójcik, 2016).

1.1.4 An Integrative Approach for Sustainability

This overview represents a valuable starting point for an effective comprehension of the evolution of firms' behaviour in terms of responsibility and sustainability practises, as it is now widely understood that a company is no longer able to survive if its target is solely and exclusively the realisation of profits.

In fact, it is possible to claim that «the durability of the business is linked to a dual ability: to attract the best resources to guarantee continuity and development for economic activities, and to meet the expectations of various stakeholders, thereby constructing [...] relations based on mutual trust and support» (Rinaldi & Testa, 2014, p. 21).

For this reason, the concept of Integrated Value Creation, a framework for companies' social liability activities based on CSR and CSV, has been developed.

IVC is a «methodology for turning the proliferation of societal aspirations and stakeholder expectations [...] into a credible corporate response without undermining the viability of the business», and its main purpose is to grow into «a tool for innovation and transformation, which will be essential if business is to become part of the solution to [...] global challenges, rather than part of the problem» (Visser & Kymal, 2015).

Moreover, it has the merit of merging the different existing approaches towards sustainability through managerial practises and value chain linkages (Visser & Kymal, 2015).

It is not a CSR technique per se, but it gives indications on how firms should act in order to integrate an effective response to diverse stakeholder expectations with a relevant amount of returns, by strictly complying with the existing regulations.

The transformation entails all the critical processes of the company, such as «governance and strategic planning, product/service development and delivery, and supply and customer chain management» (Visser & Kymal, 2015).

The most crucial aspect tangled by IVC is the possibility to create new value for the firm, in addition to the profits already guaranteed by the regular activities.

Visser & Kymal (2015) underline that the main benefits coming from the implementation of this practises are the reduction of risk, costs and liabilities, as well as an increase in reputation, revenue streams, employee commitment and an enhancement of customer satisfaction and stakeholder relations.

Nonetheless, for this integration to be effective, managers are required to develop and incorporate transformational goals within the organisational structure through a seven-step approach.

First, any significant environmental tension, disruptive technology, legislative code or standard, as well as competitors' action, needs to be carefully evaluated, with the purpose of pointing out the most urgent trends to comply with.

Secondly, as stakeholder management – intended as an inclusive and comprehensive engagement process – is one of the pillars of Integrating Value Creation and, even before, of Corporate Social Responsibility, it is of primary importance to identify and classify all the actors involved, to establish a rank in terms of power, legitimacy and urgency.

The next step should be the revision and re-alignment of the corporate mission to the priorities previously settled. Top management has the delicate task to turn the issues discovered into new strategic goals and objectives.

Naturally, since a radical shift may be required, a thorough risk analysis needs to be implemented, by taking into consideration all the possible matters.

Visser & Kymal (2015) identify environment, health and safety and social responsibility as the most important aspects to focus on, as they have the power to affect «the company's strategic, production, administrative, and value chain processes».

However, a disruptive change not only brings higher risks, but also greater opportunities.

It is therefore necessary that companies are prepared to embrace all the possible breakthroughs, in order to capture as much value as possible.

A valid approach in doing that is to form a «management system for innovation» aiming at scanning «each of the business's critical processes [looking] for opportunities to innovate».

Furthermore, processes need to be redefined and redesigned to comply with all the changes intercurrent.

Not every operation is to be changed, but it is of primary importance that all the activities are correctly aligned with the strategic goals already set.

Additionally, firms need to establish a new series of key measures, in order to analyse the performance, monitor the harmonisation with the target and detect any space for improvement. Finally, the last step to be undertaken is the practical integration of the transformational strategic goals into the company's management system, including also all the reports and auditing activities required to create a virtuous circle of continuous improvement.

The creation of new value within the firm passes through a reshape of mission, target and productive processes.

Only by a proper assimilation of the new point of view in the company's ecosystem is possible to create the right conditions for a green business to evolve and flourish.

According to Hens, et al. (2017), a green business is defined as any combination of practises «with the primary objective of minimising all forms of environmental impact».

This means that not only the manufacturing of goods is to be eco-friendly, but also all the collateral activities necessary for a firm's survival, such as administration, finance and accounting, need to keep an eye on sustainability.

Though the main concern of green economies seems to be the preservation of the environment, this is not its end point.

A wise approach towards nature and surroundings, proven through a mindful planning of fabrication, distribution and consumption of goods, does result into an advancement of human prosperity and health.

By addressing environmental risks on time, future generations will be able to benefit of all the natural resources needed for survival and wealth (Hens, et al., 2017).

1.2 Alternatives to Conventional Sustainability

1.2.1 Circular Economy and Cradle-to-Cradle

The production system currently applied by the majority of firms in all sectors has a linear shape (see Fig. 1.1).

This means that the factory system goes one-way only, starting from the procurement of resources and continuing to the processing of items, retailing and finally the disposal of dismissed elements.

This procedure implies a tremendous misuse of resources – exploited once at the beginning and then destroyed – not to mention the negative impact on the environment, which ends up being overwhelmed by tons of unnecessary rubbish.

Thankfully, such Cradle-to-Grave system is not the only possible way to approach the production line. What is needed to overcome the value dissipation due to traditional models is the development of a virtuous Cradle-to-Cradle cycle, in which waste is seen as a «nourishing factor to be reincorporated» in the process (Rinaldi & Testa, 2014, p. 83) rather than a scrap destined to the incinerator.

Fig. 1.1 - The Linear Economy Model



Author's elaboration from Ellen MacArthur Foundation, 2017. A New Textile Economy: Redesigning Fashion's Future.

Available at: <http://www.ellenmacarthurfoundation.org/publications>

A Cradle-to-Cradle procedure is achievable through the application of Circular Economy, a method aiming at «closing the loop of materials flow and [...] the dependence of economy on natural resources» (Vasiljevic-Shikaleska, et al., 2017).

By exploiting Circular Economy throughout the production chain, it is possible to limit the amount of wealth squandered during the different activities and to extract new value from exhausted materials.

This scheme is «restorative and regenerative by design» (Ellen MacArthur Foundation, 2018), meaning that it is born to be completely self-sustaining.

Theoretically, every product come to the end of its life-cycle may have the chance to be disassembled into its fundamental constituents – stand-alone components, separate features, raw materials – to be brought into a new life (see Fig. 1.2).

Fig. 1.2 - The Circular Economy Model



Author's elaboration from Ellen MacArthur Foundation, 2017. A New Textile Economy: Redesigning Fashion's Future.

Available at: <http://www.ellenmacarthurfoundation.org/publications>

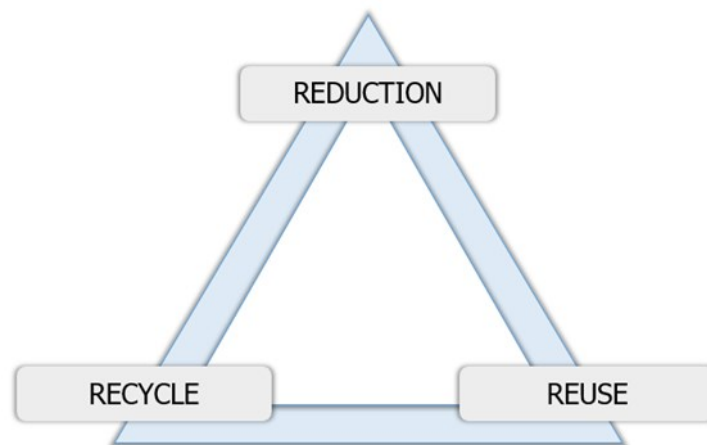
The main point in favour of the use of Circular Economy is its ability to influence the entire value chain, therefore redesigning production, process design and eventually leading to the development of new and ad-hoc business models.

It is characterised by a specific focus on the maximisation of inputs already used along the entire productive path (Esposito, et al., 2018), instead of the research of new or different contributions.

Furthermore, in contrast to many traditional CSR activities – drafted to simply diminish the amount of input required – the Circular Economy also plays a recuperative role (Esposito, et al., 2018).

This technique implies the simultaneous application of the 3Rs principles (see Fig. 1.3): reduction (improvements in production efficiency to decrease the use of energy and raw materials), reuse (passing by-products through subsequent stages) and recycling (avoiding virgin materials in favour of used supplies) (Esposito, et al., 2018).

Fig. 1.3 - The 3Rs Principles



Author's elaboration from Esposito, M., Tse, T. & Soufani, K., 2018. Introducing a Circular Economy: New Thinking with New Managerial and Policy Implications. California Management Review, 60(3), pp. 5-19

The 3Rs formula plays a substantial role in counteracting the issues related to the environmental burdens that have raised in the recent decades (Vasiljevic-Shikaleska, et al., 2017).

The increase of global population has led to a higher request for products and services, reached, for the greatest part, by sacrificing the social and environmental sides.

The thoughtless exploitation of natural resources, in particular, has resulted into the intensification of global warming, a general degradation of surroundings and the significant reduction of the volume of primary sources.

As a consequence, the wise usage of raw materials and by-products may really represent a turning point and even a competitive advantage for companies, now forced by competitors to

seek continuously new approaches and solutions to these major problems (Vasiljevic-Shikaleska, et al., 2017).

More specifically, resource scarcity issues may be «mitigated but also corrected by taking a long-term view of sustainability and by redesigning production processes according to a Circular Economy model» (Esposito, et al., 2018).

The objective of this approach is thus being able to maintain the current level of well-being without incurring in the drawbacks of overexploitation of the ecosystem.

In this sense, the Circular Economy model represents an extremely disruptive approach, as it obliges a re-definition of production and consumption schemes used by incumbent players.

Nonetheless, under its virtuous constraints, companies are able to start a path based on long-term approach and capacity sharing (Esposito, et al., 2018), eventually building a new source of economic, social and natural capital.

1.2.2 Steps towards Circular Economy

Putting in place a transition from a linear to a circular economy model represents a massive challenge for companies of all industries. In fact, it entails much more than the simple recycling of product materials at the end of their usage period (Vasiljevic-Shikaleska, et al., 2017).

Based on the studies upon sustainability made by the Ellen MacArthur Foundation, Esposito, Tse and Soufani (2018) provide a wide overview of the traits characterising the Circular Economy framework, independently from the sector of application.

These attributes, involving all the stages of the production process and focusing in particular on operations and objectives, are: design out waste, build resilience through diversity, work with renewable energy, think in systems and think in cascades (see table in Fig. 1.4).

Designing out waste

By designing out waste, firms commit themselves to reorganise their activities in such a way that remains simply do not exist, at least in the common view.

In order to understand the correct treatment of inputs, it is important to shed some light on the typologies of materials potentially used in manufacturing.

Biological ones are renewable, «designed for reuse and [...] return to the biosphere» and «nontoxic so they may be composted» (Esposito, et al., 2018), while technological elements should be of higher quality, long-lasting and designed to require lower energy consumption in the processing

Most imperatively, they should be allowed to «move back and forth between production and consumption with minimal quality or value reduction» (Esposito, et al., 2018), hence increasing the efficiency of the line and optimising the use of resources.

The ultimate aim of these practices is thus to «seek transformational changes across the breadth of the value chain [...] to retain both types of materials and preserve their value for as long as possible» (Vasiljevic-Shikaleska, et al., 2017), in the attempt to overcome the linear approach.

Resilience through diversity

Resilience, defined as «the ability of an economy, sector, or industry to withstand and adjust to unanticipated or unexpected shocks» (Esposito, et al., 2018), covers a major role in the organisation of firms, independently from the existence of a specific CSR planning.

It represents the way in which companies are able to get prepared for the setbacks of the economic activity: only players capable of clever risk management may hope to face successfully the challenges took on by markets.

In the specific case of Circular Economy, resilience is thought to be reached through diversity, intended as «thinking in systems and processes alongside creating connections and interdependencies with several parts, components, technology, and materials» (Esposito, et al., 2018).

A similar approach entails the interaction among resources and technologies towards the establishment of a responsible supply chain.

Renewable energies

Since Circular Economy's main goal is to close the production loop by avoiding the generation of waste, using renewable energies and inputs is the natural response.

By exploiting clean sources of energy, firms are able to supply their needs at lower environmental and reputational costs, not to mention the positive socioeconomic benefits.

Some of these advantages are the diversification and the increase of security in energy supply, the enhancement of regional and rural development opportunities and the creation of a new domestic industry, capable of boosting exports and creating further employment opportunities (Del Rio & Burguillo, 2008).

Think in systems and cascades

As already mentioned in the previous paragraph, applying Circular Economy means undertaking a global and general transformation of firms' activities.

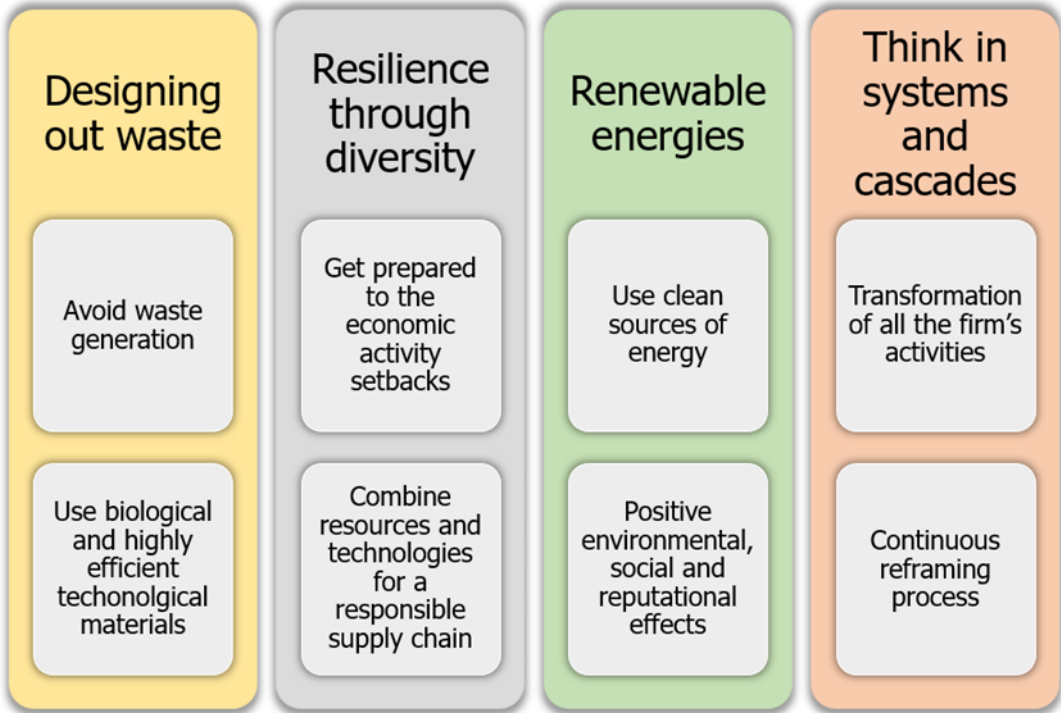
This procedure obliges managers to think and work not in terms of single actions, but at a system level, in which the different elements are interconnected.

Furthermore, given the cyclical nature of Circular Economy, a solely top-down or bottom-up transformational approach is no longer enough.

On the contrary, the reframing process should be continuous: this means that the outputs obtained at the end of a process are to be incorporated into the production line, as to ameliorate the whole efficiency.

Esposito, Tse and Soufani (2018) highlight the massive importance of this approach, as it allows to «extract additional value from materials, resources, and products by cascading them through different applications and uses».

Fig. 1.4 - The Main Steps Towards Circular Economy



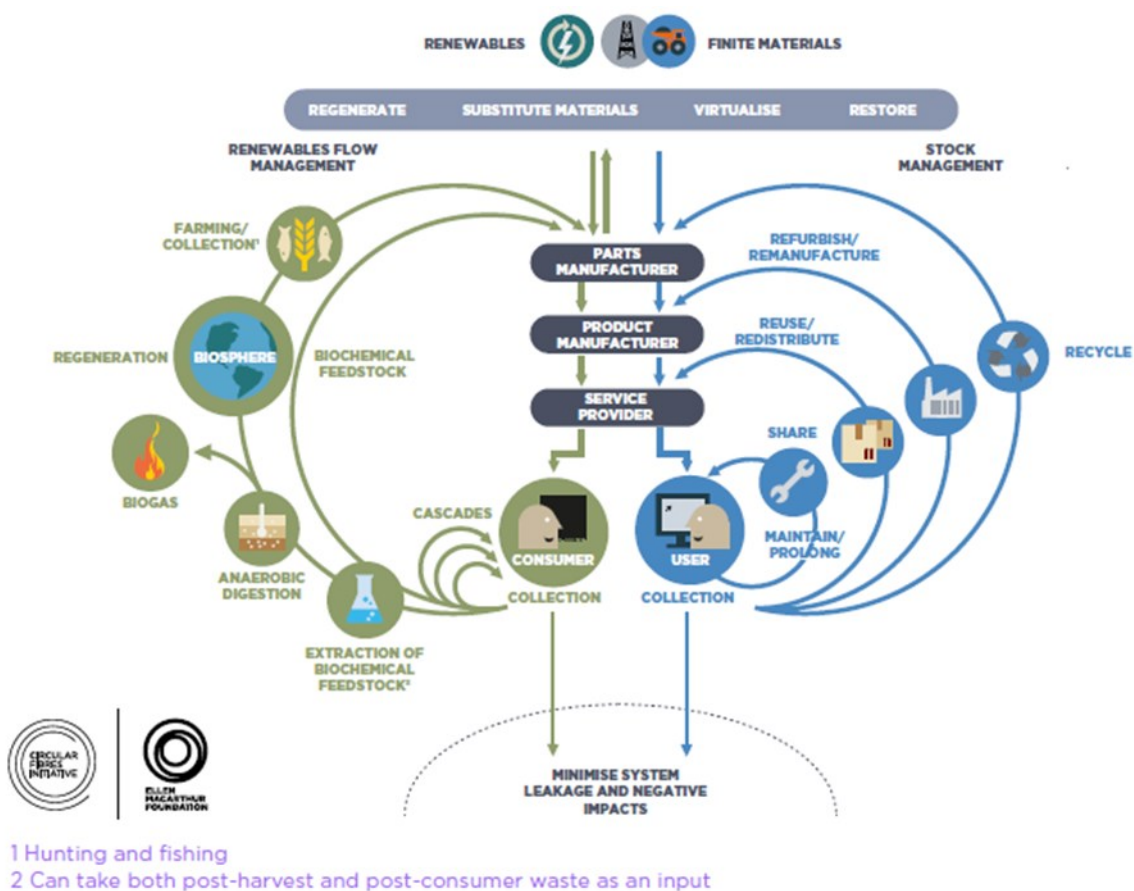
Author's elaboration from Esposito, M., Tse, T. & Soufani, K., 2018. Introducing a Circular Economy: New Thinking with New Managerial and Policy Implications. California Management Review, 60(3), pp. 5-19

1.2.3 Rethinking the Business Model

Moving from a linear economy towards a circular system implies relevant changes and modifications on the structure of a firm's business model.

All the factors involved in the creation and distribution of value within the organisational framework need to be redesigned in order to comply to the requirements of the 3Rs – reduce, reuse and recycle (see Fig. 1.5).

Fig. 1.5 - The Circular Economy System Diagram



Ellen MacArthur Foundation, drawing from Braungart & McDonough, Cradle to Cradle (C2C)

A 2017 study by the Integrated Business Institute and Faculty in Skopje (Vasiljevic-Shikaleska, et al., 2017) suggests a subdivision of the different typologies of new business models into three macro-categories, according to the distinct steps of the product or process life-cycle (see table in Fig. 1.6).

The first stage analysed is the developing phase (“Circular Innovation Model”), in which actions are to be taken at product, process and supply level.

More precisely, items should be developed as durable and easy to maintain, upgrade and eventually recycled (Vasiljevic-Shikaleska, et al., 2017), in order to increase life span and deter throw-away consumption.

Equally, firms need to keep a special eye on processes and their impact on waste production.

It is clear that spending time and money on producing clean goods is pointless if tons of resources are dilapidated during the operations, as it happens, for instance, when raw materials are not properly recycled or reused.

Finally, supply should consist, as much as possible, of renewable energies and bio-based materials.

The key aspect of CIM is therefore to apply a circular approach not only on specific outcomes, but to integrate the strategy in the entire value chain.

Secondly, the study focuses on the usage phase (“Circular Use Model”), defining some best practices in the exploitation of products and their added value.

The most significant sub-models presented are pay-as-a-service (Paas), sell and buy-back models, sharing platforms, lifetime-extension models and tracing facility models.

In Paas models performance covers a more important role than the ownership of the product itself (Esposito, et al., 2018): customers are offered several payment options, aiming at overcoming the property paradigm, such as pay for use, leasing, rental and performance agreement instead of a conventional purchase.

Sell and buy-back models have the scope to limit the number of items wasted by clients and final customers.

In this way firms commit themselves to take back their products – at different conditions – and to guarantee their correct treatment.

Sharing platforms, also called “sweating idle assets” (Esposito, et al., 2018), are designed to facilitate the exchange of items and the collective resource usage, leading to a general decrease of the new manufacturing demand.

Consequently, this model has a deep and positive impact both on resource consumption in the production phase and on waste generation.

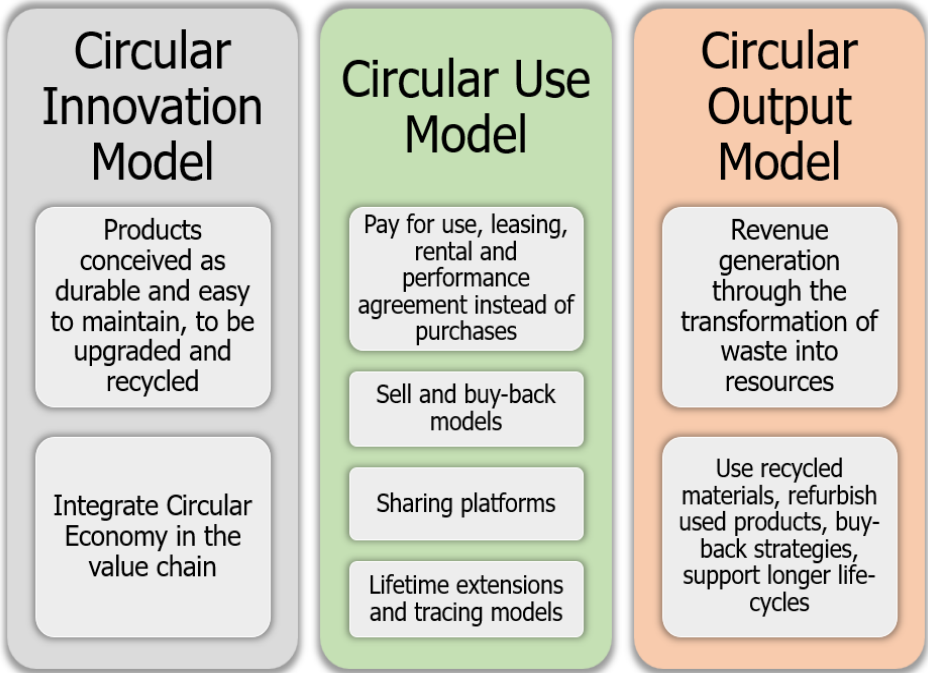
Although sharing economy is mostly thought to be applied at a consumer level, Esposito, Tse and Soufani (2018) highlight the important role this system may play also in Business-to-Business interactions.

Life-time extension and tracing models take into consideration the quality of the product, by assuring the endurance of the items and the traceability of raw materials.

Finally, the so-called “Circular Output Model” refers to the ability of firms to generate revenues through the transformation of waste into valuable resources.

This approach presents various shades of application, highly beneficial in terms of cost-saving and sustainability, such as using recycled or recaptured materials, refurbishing used products, applying buy-back strategies and supporting long-lasting life cycles by offering a wide range of spare parts and add-ons.

Fig. 1.6 - Typologies of Circular Economy Business Models



Author’s elaboration from Vasiljevic-Shikaleska, A., Gjozinska, B. & Stojanovikj, M., 2017. The Circular Economy - A Pathway to Sustainable Future. Journal of Sustainable Development, 7(17), pp. 13-30.

1.3 The Importance of Responsibility in the Fashion Industry

1.3.1 An Overview of Fashion Industry

Corporate Social Responsibility is applicable to almost every industry, but it covers – or it should cover – a major role in the fashion industry. This sector is characterised by an astonishing negative impact on the environmental setting.

Firstly, there is a high reliance on non-renewable energies. According to the Ellen MacArthur Foundation Report (2017), every year almost 98 tonnes of fossil fuel are used throughout the value chain – 342 million barrels of oil are needed just for plastic-based fibres production – and in 2015 textile production totalised an amount of 1.2 billion tons of CO₂.

Secondly, an extensive and often irresponsible use of chemical pesticides – 16% of global usage is just on cotton cultivation – produces terrible externalities for the surroundings: watercourses, soil, air, beasts and people are affected and damaged at different levels.

Human beings accumulate these toxic substances by consuming polluted water and food sources, while chemicals may be retained in final products, impacting on human health when worn and on the ecosystem when washed or eliminated (Ellen MacArthur Foundation, 2017).

Textile production employs 93 billion cubic metres of water per year – the 4% of global freshwater usage – causing serious problems of water stress in several countries (Ellen MacArthur Foundation, 2017).

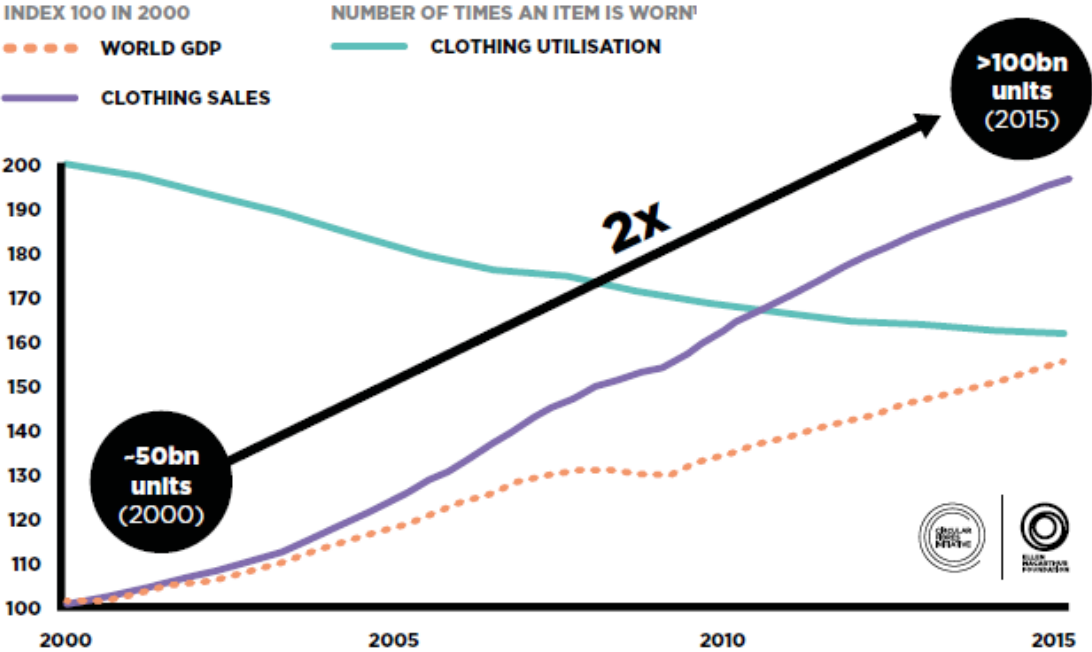
The conventional production of cotton (i.e. non-organic cotton) has caused the almost complete drainage of the Aral Lake, situated between Kazakhstan and Uzbekistan, leading to an absurd environmental disaster and the collapse of the fishing activities in the area (Rinaldi & Testa, 2014, p. 67).

Moreover, the fashion industry is characterised by a great amount of waste, primarily deriving from consumption activities. The Ellen MacArthur Foundation Report (2017) attests that the pattern in clothing usage has drastically changed in the last decades. The average time of garment utilisation has dropped by 36% in 15 years, in Western countries (Europe, USA).

At the same time, also China has been hit by the consumerist wave, with a decrease of 70% in clothes usage.

The Euromonitor International Apparel & Footwear (2016) displayed that, in the period between 2000 and 2015, the sales of apparels have doubled (growing at a higher rate than the world GDP), while the number of times an item is worn has relevantly declined (see Fig. 1.7).

Fig. 1.7 – Growth of Clothing Sales and Decline in Clothing Utilisation since 2000



1 Average number of times a garment is worn before it ceases to be used

Euromonitor International Apparel & Footwear 2016 Edition (volume sales trends 2005–2015); World Bank, World development indicators – GD (2017)

This senseless attitude causes a loss of \$460 billion (around €380 billion) in wasted garments, not to mention the astonishing amount of perfectly intact pieces of apparel turned into rubbish. Regrettably, this unfortunate situation is exacerbated by the flourishing of fast-fashion companies, offering customers a great number of stylish items at a considerably lower price. By pushing consumers to buy always more and more products, of a general lower quality and subjected to a faster obsolescence, they contribute to worsen the already precarious environmental situation.

Furthermore, to provide such cheap products, firms need to cut their cost at some point of the productive processes, causing even more harm.

Nonetheless, it is important to highlight that many of these fast-fashion companies are committing themselves to several CSR activities, in order to limit their negative impact without losing profitability.

1.3.2 Circular Economy Applied to Fashion Firms

The mere recycling of materials is not sufficient per se: for the purpose of extrapolating hidden value from the inputs, diverse actions are to be undertaken.

Vasiljevic-Shikaleska et al. (2017) indicate the necessity to operate on the reuse and remanufacturing of products, the abolition of toxic substances throughout the processing, the boosting of innovative consumption schemes and, in the end, the development of updated business models (Vasiljevic-Shikaleska, et al., 2017). The accomplishment of these results implies a rethinking of the disposal sector, a standardisation of components and the switch from property-focused items to usage-based products (Vasiljevic-Shikaleska, et al., 2017).

Referring to fashion industry, actions are to be taken in the textile supply, manufacturing, retailing, use and disposal and transportation (Rinaldi & Testa, 2014, p. 70).

First of all, firms should take into consideration the impact that their fabrics may have on the sustainability of the final product. For example, although synthetic threads may entail a more limited use of energy and resources, their non-biodegradability represents a serious threat for the environment.

Moreover, an incorrect disposal, as well as the simple destruction of the final products, is a huge waste of potential value.

Consequently, natural fibres correctly treated, such as flax or organic cotton (i.e. cotton grown with a reduced amount of water) are to be preferred to conventional and/or artificial fabrics (Rinaldi & Testa, 2014, pp. 71-73).

Secondly, even with a watchful selection of raw material, the production process has to be addressed with a special care for the excessive consumption of water and energy and the massive use of dangerous chemicals (Rinaldi & Testa, 2014, p. 73).

What is crucial to do is to keep an eye on establishing transparent partnerships with green suppliers and manufacturers, as well as respectable contractors and sub-contractors, in order to achieve a real and serious product sustainability.

Not less importantly, packaging should always be eco-friendly, for instance avoiding multi-material cases, as well as the point of sales, built with responsible criteria and attention to innovation.

Furthermore, producers and consumers shall cooperate to enhance the application of best practices in the maintenance – washing, drying, ironing – and in the correct throw-away, for instance by collecting used items in shops and providing solutions for refurbishing and renovating goods.

Finally, in the current global and complex supply chain, driven by just-in-time needs set by fast-fashion companies, the total cost for transportation has increased, as well as the subsequent amount of pollution.

To fight the carbon footprint caused by the stock handling, firms may choose a combination of sea and railway transport, less impacting than airplanes and trucks (Rinaldi & Testa, 2014, p. 75).

1.4 Research Gap

Despite the impact Circular Economy has proven to have during the last years, the debate on the implementation of cradle-to-cradle systems on a large scale is still in its infancy, and the industrial world seems sceptical towards completely embracing it.

As to perform effectively, Circular Economy needs to be embedded within the firm's organisational and productive scheme: all the activities of the value chain are to be shaped by the 3Rs requirements – reduce, reuse, recycle.

Clearly, this comes to a cost in terms of money, time and facilities, and even the business model per se might have to be redesigned, as to keep up with the new operations.

Only few established firms are able to deal with such a consistent investment, and only few start-ups are brave enough to jump in such a fresh but insecure environment.

At the present day, not many attempts have been made to transform the traditional linear structure of production into a circular one, and in most cases these efforts have been portrayed by companies already involved in the implementation of sustainable practices. Moreover, such activities are often interpreted – and sometimes even intended – as mere experiments to catch up with the latest CSR objectives, rather than a precise managerial decision aiming at reshaping the business mindset.

In order to effectively integrate Circular Economy practices in the current industry, the knowledge and the awareness on the innovation of traditional business models should be increased both in terms of quantity and quality.

The visibility granted to the existing pioneering attempts to renovate activities within firms is still too limited, as they tend to be seen as collateral actions when portrayed by established players and addressed as naïve when proposed by young start-uppers.

If the objective is to allow and encourage the advancement of the discussion, the inquiry should embrace not only the literature perspective, but also the investigation of real business cases.

The rigorous analysis of practical examples, regardless the environment they are developed in, might guarantee Circular Economy a part among the true revolutions in business, rather than a role as the latest trend.

At the present time, the scientific research seems to have missed something in depicting and examining the real-world application of Circular Economy practices. To overcome this lack of interest and rigour, it is now time to build up a more extensive and exhaustive analysis of the neglected phenomenon, as its relevance for a safe and fair future can be no longer ignored.

1.5 Purpose of the Research

Even though the existing literature concerning the alternatives to conventional sustainability can be considered quite extensive, it is still caught in the analysis of the theoretical framework, rather than the practical applications.

The concept of Circular Economy, in particular, has been in the spotlight for years, but the debate has not moved beyond the academic perspective.

On the grounds that there has been a lack of interest in contributing to the development of the topic among the scientific community, the purpose of this thesis is to illustrate some selected virtuous examples of the application of Circular Economy. The investigation focuses specifically on the fashion industry, given the negative environmental impact this sector has proven to have.

Therefore, the research questions to address are the following:

RQ1: *What is the current state of business in terms of sustainability and Circular Economy application?*

RQ2: *Which are the most relevant examples of sustainability and Circular Economy application in the Italian fashion industry landscape?*

RQ3: *Which are the prevailing market trends in terms of sustainability and Circular Economy application?*

The ultimate ambition of such analysis is to present a concise summary and an encouragement for fashion companies to further the integration of Circular Economy models in their businesses.

Chapter 2 – *Methodology*

2.1 Selection Criteria

Six Italian fashion firms have been examined: Salvatore Ferragamo and OrangeFiber, WRAD, Prada, VIC – Very Important Choice and Progetto QUID.

These companies are characterised by different business models.

Salvatore Ferragamo and Prada are listed companies, both well-established and globally renowned, covering a prominent role as prestigious representatives of the Italian design. They are true fashion firms, as they take care – directly or indirectly – of the design, manufacturing and sales of clothes and accessories. Moreover, they are on the front row in promoting luxury and beauty in many different fields – art, food, culture.

OrangeFiber is a young producer and supplier of raw materials: its main activity is the creation of organic threads – starting from the processing of food industry waste – to be sold to manufacturing companies, and not the realisation of finished items.

WRAD is a new start-up working in the fashion sector dealing with the conception and sales of garments, with a particular regard to the manufacturing process, characterised by a high level of sustainability.

VIC – Very Important Choice is a Sharing Economy platform which role is to provide customers and sellers a virtual meeting point for leasing clothes and accessories. Partnerships with manufacturers renowned for their responsible practices are established, as sustainability is the *fil-rouge* of its work.

Progetto QUID is the only non-profit organisation among the considered players. They produce and sell apparel, but they do not have a lucrative objective. Their raw materials consist of industrial textile scraps, obtained thanks to donations or at a favourable price.

All the investigated companies have been chosen for their distinguished duty in the implementation of responsible actions throughout the organisation, with a particular regard for the application of Circular Economy practices within their processes. The commitment demonstrated in raising awareness on the topic, through the participation to and the organisation of dedicated conventions, has been taken into consideration too.

Italy offers an incredibly wide pool of players in the fashion and luxury industry, as well as numerous virtuous examples of CSR. Consequently, it has been decided to circumscribe the inquiry to Italian companies.

Finally, the size and heritage of the firms have not been part of the criteria, as the strength of Circular Economy lays in its versatility, and in the possibility of being equally applied to established firms and young start-ups.

2.2 Data Collection

The analysis presented in this thesis has been portrayed thanks to the elaboration of qualitative data, collected throughout conferences, online content analysis, interviews and sustainability reports.

The first round of information has been obtained during a series of conferences on the topic of the implementation of sustainability practices in the fashion industry.

The events took place in Milan between April and May 2018, and they involved interventions from speakers belonging both to the academic and the entrepreneurial world, as to grant a comprehensive overview of the outlined themes.

- Ethics in Fashion was organised by the Bocconi student association Green Light for Business on 12th April 2018, and it included the participation of representatives from Progetto QUID, OrangeFiber, Patagonia and Vivienne Westwood.

The first two firms are relatively new players in the fashion industry, and they employ a business model entirely based on the cradle-to-cradle system. The OrangeFiber team extract fibres from the residuals of orange processing, while Progetto QUID make use of industrial scraps as raw materials in clothes manufacturing.

Patagonia is a brand globally recognised for its initiatives in support of sustainability and preservation of the environment. Their commitment is stated by their mission, underlying the need to be responsible, protect the environment and inspire other businesses.

Vivienne Westwood is one of the few high-end luxury fashion companies to embrace sustainable practices by encouraging social engagement and clever consumption.

- Ethics in Fashion – Through traceability revolution took place on 23rd April 2018 at Bocconi University, as a kick-off for the Fashion Revolution Week, an event born to increase the awareness about the traceability in luxury and retail industry and to commemorate the Rana Plaza disaster occurred in 2013.

Salvatore Ferragamo, OVS, Re-Bello, WRAD and Zerobarracento were some of the participant companies, and they portrayed different declination of the concept of sustainability.

In particular, Salvatore Ferragamo has started a successful partnership with the aforementioned OrangeFiber for the implementation of Circular Economy, and WRAD has integrated the use of recycled materials in its operational activities.

- Ethics + Aesthetics = Sustainability was organised by Politecnico di Milano on 21st May 2018 and hosted interventions from academic representatives and spokesmen from Progetto QUID and VIC – Very Important Choice, an innovative Sharing Economy platform launched in 2018.

All the speakers involved presented an overview of how their firms have integrated sustainability in their business model, which results – in terms of visibility and reputational management – they have been able to achieve and how this topic is about to evolve in the future.

Besides the interventions by the representatives of the selected firms, a great source of information has been the web, in the form of institutional websites and articles.

Through the careful selection of company presentations and third-party analyses it has been possible to delineate a wider scope of the firms' activity, and to deepen the structure of their businesses.

The employed sources range from official web pages of the companies to institutional organisations web pages (e.g. Italian Chamber of Fashion), from online contents posted by reputable news media to dedicated fashion blogs.

As to get a further insight to the firms' vision and to better understand some aspects of the activities portrayed, some representatives of the companies have been consulted, both directly and during the events.

Spokespeople have been asked questions about:

- The decision to invest in sustainability and Circular Economy and the expected results in terms of returns, visibility and future developments
- The impact of the new activities on investments, managerial structures and organisational mindset

- The results in terms of costs, sales, reputation and customer base, and their eventual distance from the expectations
- Any possible further expansion of the respective activities
- Their own thoughts on the current application of sustainable practices and the possibility to build a “Circular Future”

Concerning the reports considered, the Ellen MacArthur Foundation Report has represented the initial source to better understand the implications of the topic. Thanks to these guidelines, it has been possible to delineate how to structure the analysis and identify the key aspects to focus on.

Moreover, with regards to the established firms addressed – Salvatore Ferragamo and Prada – the sustainability reports drawn by the companies themselves have allowed a clearer and broader view to the innovations portrayed during the last years, as well as the further future developments.

2.3 Structure of the Analysis

As it has been previously mentioned, the analysis is descriptive and based on qualitative data, collected through a variety of sources. Starting from the information gathered during the conferences and from the web, the activities related to Circular Economy have been outlined, as to display the effort and the actions carried out by each company.

Firstly, the theoretical framework laying behind the concept of Value Chain – 1985 Micheal Porter’s studies – has been explained, as to provide a strong conceptual background for the analysis itself.

Secondly, the contribute defined by the selected companies in the application of Circular Economy has been outlined for each of the primary steps of the Porter’s Value Chain.

Each of the firms has the merit to have integrated Circular Economy in one of the steps, and they all have been evaluated with regard to their effectiveness in one specific group of activities:

- Salvatore Ferragamo and OrangeFiber have established a partnership to apply Circular Economy to the procurement stage (in-bound logistics)
- WRAD uses Circular Economy throughout its operations
- Prada represents an example of sustainability for the out-bound logistics

- VIC – Very Important Choice applies Circular Economy on the customer side by implementing an innovative Sharing Economy platform
- Progetto QUID is a valid solution for textile companies unable to integrate circularity in their activities, but interested in making use of Circular Economy at an industry level

To effectively present the actions of each company and their positive externalities, the inquiry has been designed as follows.

- Brief introduction of the value chain step involved, and focus on its negative spill-overs on the environment
- Overview of the player role in the fashion industry, and description of the actions implemented to integrate sustainability at a business level
- Comparison with the steps towards Circular Economy presented in the Literature Review (*Designing out waste, Resilience through diversity, Renewable energies, Think in systems and cascades*), as to understand the effective impact of such actions

Chapter 3 – *Context and Analysis*

3.1 Porter's Value Chain Framework

The concept of Value Chain was firstly elaborated and developed by Michael Porter in 1985, as a mean to examine all the activities pursued by a firm and their interactions in a systematic manner (Porter, 1985). Indeed, a firm can be seen as a «collection of activities [...] performed to design, produce, market, deliver and support its product», forthrightly echoing «its history, its strategy, its approach to implementing its strategy, and the underlying economics of the activities themselves» (Porter, 1985, p. 36).

The need for a precise and structured representation lies in the quest for the roots of competitive advantage. The major aim of value chain analysis is to unbundle the firm «into its strategically relevant activities in order to understand the behaviour of costs and the existing and potential sources of differentiation» (Porter, 1985, p. 33). Therefore, by thoroughly investigating all the processes involved in the generation of value, it is possible to understand how to perform more effectively or more efficiently than other players in the same industry, that is, how to build a strong and durable advantage over competitors.

This improvement can be reached by leveraging the existing differences and breakpoints with respect to rivals, as well as by neatly managing the interconnections among the processes (Porter, 1985).

According to Porter, value activities can be separated into two main categories: primary and support activities.

On one hand, primary activities are «involved in the physical creation of the product and its sale and transfer to the buyer as well as after-sale assistance» (Porter, 1985, p. 38), and can be partitioned into five steps:

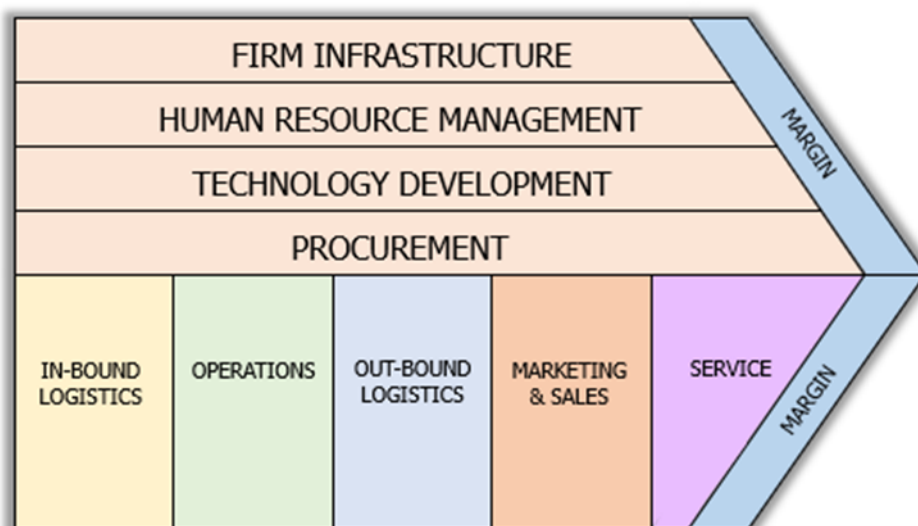
- In-bound logistics: reception, storage and dissemination of production inputs
- Operations: transformation of those inputs into final products
- Out-bound logistics: collection, storage and physical distribution of the items to the respective buyers
- Marketing and sales: creation of a need in purchasers and provision of adequate means to buy the products

- Service: provision of post-sale assistance with the aim to increase or preserve the value of the items

Support activities, on the other hand, are the ones involved in the upholding of primary activities, and are designated to provide «purchased inputs, technology, human resources and various firmwide functions» (Porter, 1985, p. 38). They are generally represented by: procurement, technology development and R&D, human resource management and infrastructure.

A summary of the company processes can be found in the following scheme:

Fig. 3.1 – The Porter Value Chain



Author's elaboration from Porter, M. E., 1985. Competitive Advantage - Creating and sustaining superior performance. 1 ed. New York: The Free Press.

Furthermore, three kinds of auxiliary activities, playing a distinctive role in the value creation process, are to be found within each of the aforementioned categories (Porter, 1985).

They are classified as:

- Direct: they are first-hand involved in creating value for purchasers
- Indirect: they allow the execution of direct activity on an ongoing basis
- Quality assurance: they assure a specific level of quality in the other activities

Their objective is to contribute to the smooth prosecution of the primary and support activities.

The following analysis takes into consideration a precise aspect of Porter's value chain. Each of the primary activities (in-bound logistics, operations, out-bound logistics, marketing and sales and service) represents the starting point to address specific applications of Circular Economy in the value creation process.

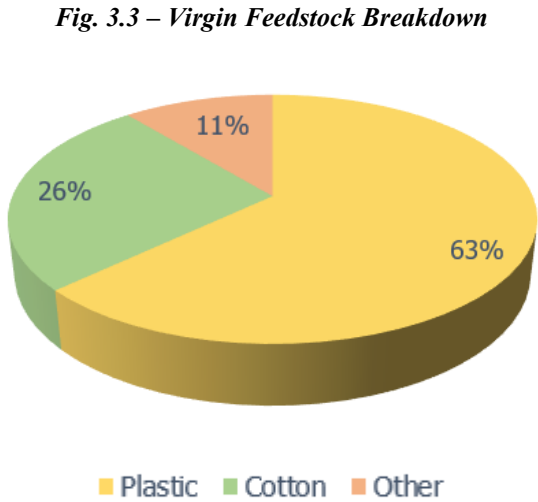
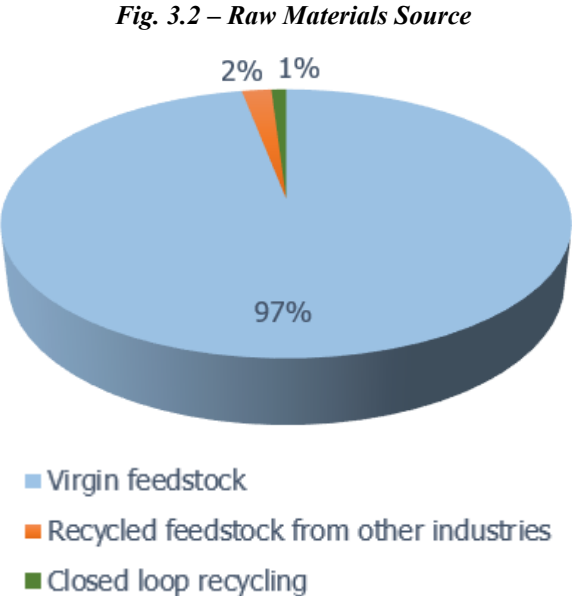
At every stage, a valid example carried out by a company belonging to the fashion industry is described, in order to highlight virtuous actions that have led to a relevant decrease in waste generation and pollution.

3.2 A Step-by-Step Approach

3.2.1 In-bound Logistics

The first activity to take into consideration is the In-bound Logistics.

As it has been previously hinted, during this step all the raw materials and inputs required for manufacturing are chosen and collected. In fashion industry the stage implies a careful selection of the most suitable threads and add-ons needed to complete the final product. Most of them are still originated from virgin materials (see Fig. 3.2 and Fig. 3.3).



Author's elaboration from Ellen MacArthur Foundation, 2017. A New Textile Economy: Redesigning Fashion's Future.
Available at: <http://www.ellenmacarthurfoundation.org/publications>

In a value chain designed to comply with the standards set by Circular Economy principles, this means relying on components derived from the waste products of other industries. The inputs might as well be organic – eco-friendly and bio-degradable – or synthetic: the crucial point is to avoid as much as possible the use of virgin material, preferring instead a recycled fabric. By doing so, what is discarded by one player becomes vital for its partner, leading to a significant reduction of waste creation and the preservation – or even the increase – of the amount of value exchanged.

Nonetheless, in order to fully achieve sustainability in the business, other aspects should be taken into consideration, such as the predominant usage of renewable energies and organic materials and the integration of these practices in the whole production process.

A very fitting example of such procedures is represented by the virtuous partnership between the luxury goods company Salvatore Ferragamo and the Sicilian start-up OrangeFiber.

In April 2017, Ferragamo presented a Capsule Collection – a «limited edition [production] which transcends seasons and trends by being functional [and] commercial» (source: Capsule Collections on BusinessOfFashion.com, 02/06/2018) – realised using a unique organic thread derived from the residues of the oranges processed in food companies.

The Salvatore Ferragamo Group is not new to the implementation of sustainable techniques in its activities, and this partnership with OrangeFiber comes as a natural prosecution of its actions towards a more responsible business (source: Ethics in Fashion event, 12/04/2018).

In the following paragraphs a closer look to both partners will be provided, in order to understand what has led an established fashion giant to build a cooperative relationship with a start-up and how significant this collaboration is for the redefinition of the value chain.

Brief history of the Salvatore Ferragamo Group

The designer Salvatore Ferragamo started his own activity in 1927, firstly focusing on the creation, production and sale of women's shoes.

The first stores, directly operated, were opened in Florence, Rome and London only one year after the beginning of the activity.

Over time, the Salvatore Ferragamo Group has diversified its distribution strategy by adding flagships stores managed by selected third parties and by being present in the wholesale channel with dedicated spaces in highly profiled department and specialty stores (source: Salvatore Ferragamo Institutional Website).

The decision to retain control over the points of sales, although at different levels, reflects the concept of exclusivity and luxury entrenched in the brand, signalling a specific focus on sophisticated and high-end items, all strictly Made in Italy.

Currently, considering the whole distribution activity, the company possesses a total of 685 stores, located in more than 90 countries (source: Salvatore Ferragamo Group: Sustainability Report 2017).

The manufacturing of a clothing line, as well as leather goods, started in 1965, a few years after the founder's departure, and it proceeded with an expansion in the silk manufacturing in 1971. Towards the beginning of the 1980s the company introduced the men's collection – clothes, shoes and accessories – and in 1997 it inaugurated the perfume production (in a joint-venture with Bulgari S.p.A.), directly created and distributed (source: Salvatore Ferragamo Institutional Website).

Now, Salvatore Ferragamo Group actively takes care of footwear, leather goods, apparel, silk products, accessories and perfumes, while it outsources to third parties the production of eyewear and watches. The objective is to preserve the value of the brand and to guarantee the highest quality to the customers, and it is achievable thanks to a wise policy of investments in new technology and R&D (source: Ethics in Fashion event, 23/04/2018)

Since 2011, Salvatore Ferragamo Group is a listed company, but it is still characterised by a strong tie with the members of the Ferragamo family, who cover sizable managerial positions and are secured with the 52% of stocks.

A primary role has always been covered by Wanda Ferragamo Miletto, wife of the late Salvatore, who has headed the company since 1960. She has recently been appointed as Honorary President as a recognition for her indefatigable contribute to the company throughout the years (source: Salvatore Ferragamo Group: Sustainability Report 2017).

The linkage to the familiar aspect of the business and the importance of Salvatore's legacy has the merit and power to «balance image and profit and [...] bring the company to a longer life», by combining creativity and innovation with traditional craftsmanship and a solid heritage (source: Ferruccio Ferragamo in Women's Wear Daily, 27/02/2017).

Ferragamo's Corporate Social Responsibility Efforts

The Group has been strongly committed towards conscious practices in the workplace since many years, primarily focusing on the accurate selection of suppliers and the human capital management.

The tight bonds with local *distretti* – dense production areas specialised in a specific industry – and their communities have inspired the firm to develop a genuine interest in supporting its workers and collaborators by overcoming the simple respect of existing laws and regulations. In the words of Ferruccio Ferragamo, President of the Group since 2006, the aim has always been to promote «a responsible business approach based on the respect for people, the community, and the environment every day», following his father's motto “There is always

something more beautiful, more perfect, still to be created” (source: Salvatore Ferragamo Group: Sustainability Report 2017).

Several initiatives have thus been carried out throughout the years (source: Ethics in Fashion event, 23/04/2018), the most significant of which are:

- The entrance of the firm in the Working Group on Sustainability, a program patronised by the Italian Chamber of Fashion to foster a more sustainable industry, in 2011
- The creation of a Green Team, designed to promote CSR projects throughout all business functions, and the draft of the first Sustainability Report, with the objective to highlight Ferragamo’s efforts in building a less harming business, in 2014
- The allocation of a full section of the website to CSR activities in 2016
- The signature of the Manifesto for Circular Economy, an alliance of different companies which aim is to apply the principles of sharing, recycling and reutilising during all phases of their activities, in 2017

Moreover, a wide landscape of internal policies and regulations exists within the structure of the Ferragamo Group.

Notably, it is worthy to mention the Control and Risk Committee, whose role is to foresee, avoid and manage reputational risks related to the firm and its stakeholders through a constantly updated Enterprise Risk Management model, the Code of Ethics, which outlines the internal ethical and behavioural standards for the protection of employees, production activities and brand value, and the Anti-Corruption Policy, which aims at complying with the global best practices and encourages whistleblowing.

Broadly speaking, the main area of the intervention of the Group can be found in the production phase and the supply chain control (source: Ethics in Fashion event, 23/04/2018).

As a luxury company, the Ferragamo Group does not produce anything in house, but it outsources the activity to specialised supplier and, in order to guarantee the excellence of the goods, it needs to be able to trust them completely.

For this reason, external and certified audit agencies are in charge of monitoring the behaviour of both contractors and subcontractors and these partners are required to endorse specific Code of Conduct that allows the Group to control their actions in terms of business ethics and integrity, labour and human rights and environmental responsibility.

The Code will be launched and shared with all the players involved in the supply of raw materials, services and finished items during the year 2018.

Furthermore, as a means of protection for Made in Italy quality, multiple anti-counterfeiting systems have been implemented.

The most relevant one is represented by an “authenticity tag”, developed in collaboration with the University of Florence, based on Near Field Communication technology. Each item is marked with this tag, which univocally identifies it as original.

The Sustainability Report for 2017 has also expressed the need for the establishment of specific guidelines to help the firm embed a long-term sustainability approach in a global strategy.

This new plan shall not be focused exclusively on the growth of profitability, but also with the negative and positive externalities eventually arising, in accordance with the Sustainable Development Goals settled by the United Nations¹.

For this reason, a three-year plan has been set up, having as objective the achievement of twelve targets. The plan focuses mainly on the enhancement of the relationship with stakeholder (internal and external), the promotion of Welfare and charitable initiatives and the implementation of a cleaner production system.

In particular, the report underlines the necessity to develop shared projects in collaboration with suppliers. The objective is to increase the efficiency in terms of energy consumption and the usage of sustainable materials and by products, as well as diminishing the overall amount of resources and the tracking of the chemical substances present in raw materials and finished items.

The Group has always had a special eye on the impact of its business activities, putting environmental sustainability on top of its development policies.

Major actions have been undertaken to monitor the use of plastic and paper, by using raw materials of certified origins, as well as reducing the overall amount of energy consumption and preferring renewable sources over fossil fuels.

All the components needed in packaging and transportation of goods – shopping and dust bags, bubble wraps – and the promotional materials, such as flyers and catalogues, are likewise entirely organic, being made with 100% bio-degradable matters.

Moreover, as the shipment of items from e-commerce purchases entails a great outlay of carbon emissions, in 2017 the Group participated in a project that allowed the offset of more than 30 tons of CO₂ (source: Salvatore Ferragamo Group: Sustainability Report 2017).

¹ These goals are: good health and well-being, quality education, affordable and clean energy, decent work and economic growth, sustainable cities and communities and responsible consumption and production

The Ferragamo-OrangeFiber Partnership

The interest of Ferragamo for both sustainability and technological innovations has allowed the Group to get in touch with the new born company OrangeFiber.

Even though Ferragamo has already been involved in numerous CSR activities, it is possible to say that this collaboration has represented a further and revolutionary step towards sustainability (source: Ethics in Fashion event, 12/04/2018).

OrangeFiber addresses a major issue for the Sicilian food processing industry: each year around 700,000 tons of waste – of which 400,000 only in Sicily – are produced in the treatment of oranges, and their disposal represents a thorny issue.

The common arrangements of those residuals – that is, their transformation into livestock feed or gelling agents – is extremely costly for producers, who often end up abandoning the residuals in pipelines or open fields (source: Marco Pratellesi on L'Espresso, 13/03/2015).

As a consequence of this situation, Adriana Santonocito, a fashion student specialised on innovative textiles and founder of the company along with Enrica Arena, came up with the idea of turning what was left from the pressing of citrus into a fibre to be used, next to other organic threads – such as cotton or silk – in the manufacturing of garments.

Clothes created with this high-quality typology of fabric have also another peculiarity: besides being completely natural, they are enriched with active ingredients that are released on users' skin once the apparel is worn.

Once developed the process, the two women decided not to sell the patent of their solution, but to act in person to make it successful. Their aim was to disrupt and reshape the fashion industry mechanism, and simply handing over such a powerful idea did not seem the right thing to do.

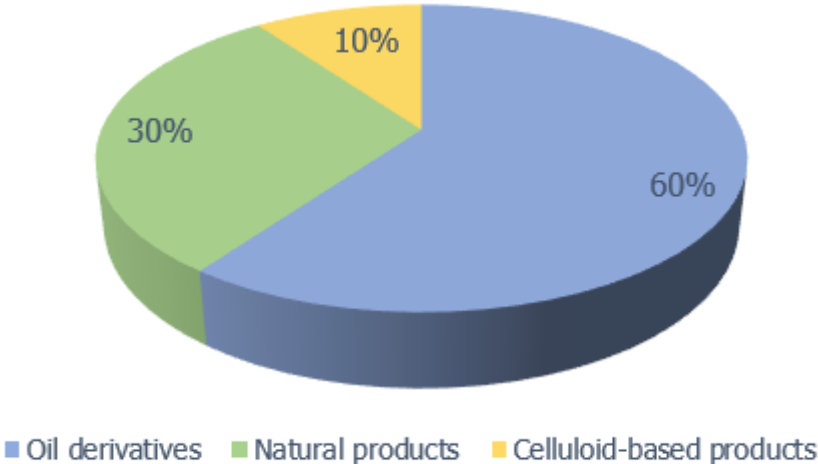
At the same time, in order to become attractive to established companies and confront them as equals, they were required to be relevant players in the fashion landscape, by turning into entrepreneurs and setting up their own company (source: Enrica Arena at Ethics in Fashion event, 12/04/2018).

The relevance of this project is not limited to the management of food industry waste. Of the raw materials currently used in the business of fashion, around 60% are oil derivatives (energy consuming and non-biodegradable), 30% are natural products (cotton, wool, silk) and the final 10% is celluloid-based (see Fig. 3.4).

Although the materials extracted from trees and plants are, or should be, completely natural, their production is leading to a serious problem of deforestation (source: Ethics in Fashion event, 12/04/2018).

Boosting and enforcing the process of celluloid rejected in other activities has the outstanding advantage of drastically limiting deforestation, producing green matters and virtuously managing industrial waste.

Fig. 3.4 – Raw Materials Composition



Author's elaboration from Ethics in Fashion event interventions, 12/04/2018

Salvatore Ferragamo has been the first brand to decide to collaborate with OrangeFiber, as it represented a relevant step into environmental and social responsibility.

The choice of this particular firm is in fact related not only to the exploitation of circular economy, but also to a community-based development.

OrangeFiber is a Sicilian start-up founded by two Sicilian women, whose objective has always involved the idea of bringing back value to their community. By building such an important partnership, OrangeFiber is able to communicate its vision to a larger public, and to vehiculate a positive message for a responsible production, based on a severe reduction of waste and an accurate selection of the ingredients, to work hands in hands with social enhancement.

In this sense, although the Ferragamo Group has always been interested in sustainable activities, this relationship is based on completely different preconditions, opening the way for a true revolution in the CSR field.

The success of their Capsule Collection has led to an increase in the level of awareness in terms of thorough use of resources, imposing companies to question their current procedure and the effects and externalities, positive or negative, they happen to have on their surroundings.

A call for a global movement is taking place, and fashion companies shall learn and start to work together in pushing the change.

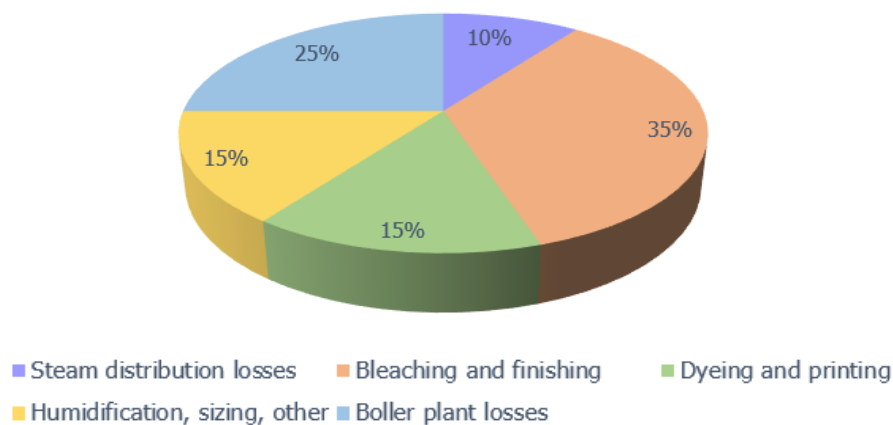
Summary table of Circular Economy integration achievements

<p><i>Salvatore Ferragamo</i></p>  <p>ORANGE FIBER</p> <p><i>Partnership to replace traditional raw materials with new textiles originated from orange industry waste</i></p>	<p>Designing Out Waste</p>  <ul style="list-style-type: none">• Clever inter-firms waste management to avoid the use of virgin materials• Significant reduction of non-biodegradable waste generation <p>Resilience through Diversity</p>  <ul style="list-style-type: none">• Creation of solid partnerships for sustainability and technological innovations <p>Think in Systems and Cascades</p>  <ul style="list-style-type: none">• Continuous renewal of the current activities through the enforcement of the relations with stakeholders to achieve long-term sustainability
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3.2.2 Operations

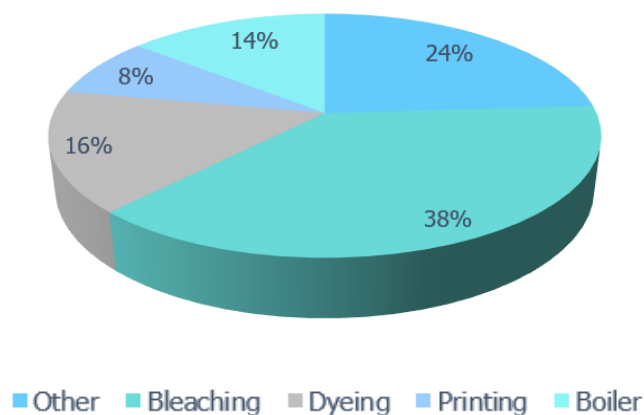
Moving forward the analysis of the value chain, the second step to be investigated is the one related to the operations, intended as the transformation of production inputs into refined items. This stage entails the use of a great amount of resources: from the processing of raw materials to the finishing of by-products, a wide range of substances – the majority of which are often chemicals, accounting for a total of 9 billion kilograms every year – and components is needed (source: WRAD Institutional Website), not to mention the massive energy and water consumption required to finalise each activity (see Fig. 3.5 and Fig. 3.6).

Fig. 3.5 – Thermal Energy Use in a Textile Plant



Author's elaboration from Hasan, A., 2018. *Cost Effectiveness Based on Increasing Energy Efficiency Opportunities in Textile Industry*. [Online]
Available at: <http://textilelearner.blogspot.com/2013/04/cost-effectiveness-based-on-increasing.html>

Fig. 3.6 – Water Consumption in Conventional Dyeing Process



Author's elaboration from Sellam, E. & Hada, S., 2013. *To Dye or Not to Dye*. [Online]
Available at: <http://chinawaterrisk.org/opinions/to-dye-or-not-to-dye/>

The WRAD Experience

Among the several passages a cloth must go through to be transformed into an apparel, dyeing is doubtlessly one of the most harming.

In order to keep manufacturing costs as low as possible, companies tend not to care too much about the elements they and their contractors and subcontractors use in the processing. This reckless attitude often implies an employment of toxic substances, such as lead or mercury, that end up contaminating the surrounding environment and undermining workers' and users' own well-being and safety (source: WRAD Institutional Website).

As a consequence of this obnoxious trend, the Italian-Brazilian start-up WRAD, launched in Berlin in 2015, decided to exploit technology to give a boost to the textile industry and grant a cleaner production.

Born with the ambition of preserving and enhancing environmental safety in order to secure a healthy future for the generations to come, the company has successfully implemented a series of practices to encourage the rise and growth of a so-called livable fashion (source: WRAD Institutional Website).

Their innovative approach consists in the creation and use of a unique dyeing material, composed for 60% of recycled graphite powder, a non-toxic element mainly deriving from electrodes discarded by technological firms.

Besides being eco-friendly, graphite, which is both odourless and tasteless, has also the merit of being a natural lubricant, giving the cloth a smooth texture (source: WRAD Institutional Website).

As a matter of fact, this technique is not entirely new. In the development of their idea, the founders of WRAD have studied an ancient method, firstly adopted by the Romans, who used to exploit the large amount of graphite available in the area of Monterosso Calabro, in Southern Italy, to stain fabrics (source: Ethics in Fashion event, 23/04/2018).

By renovating this antique process, the WRAD team has been able to elaborate a safe and eco-friendly procedure, making an important contribution in limiting pollution in manufacturing processes.

In this way, without making use of any chemical add-on, blue water consumption is reduced by 95% and CO₂ is cut down of 93%.

Furthermore, WRAD's T-shirt GRAPHI-TEE, the first item to be processed with such technique, was awarded as Best Product Design at the RedDot Design Award in 2017, giving the team a worldwide visibility and recognition (source: Ethics in Fashion, 27/04/2018).

This prize represents a great success also from a market and marketing related point of view, as it entails a strong interest from the public for both design and technological innovativeness.

However, the G_pwdr – as the material has been called – is not the sole green element involved in their activities. All of the raw materials used – organic cotton and hemp – have been chosen for their high quality, resistance and low impact on the environment, and are certified by major competent institutions.

By focusing their production inputs on natural fibres, the firm is able to create garments completely bio-degradable and virtually zero-impact.

Moreover, the WRAD team has decided to get rid of any oil derivatives to make the items weather resistant, relying instead on biological beeswax to protect the different pieces of clothing. All the apparels are therefore free of potentially harming or toxic chemical substances. Finally, as one of the founding principle of Circular Economy practices, WRAD chose to focus on the sharp reduction of energy and water consumption as well.

For this reason, the company has successfully started implementing the use of chitosan, an organic polymer deriving from the of carapace of crustacea, in the treatment of cotton threads for denim manufacturing. Thanks to this ingenious process, result of a synergy among several Italian firms, WRAD has granted its production an enormous decrease in the amount of resources used, as well as the exclusion of almost the totality of chemical substances needed in the finishing phase of processing.

All of these actions have led to a severe cutback in the negative impacts of fashion production on the environmental safety (source: WRAD Institutional Website).

As much as WRAD's innovations have granted the company a prominent place in the current fashion industry landscape, seeing them as a mere application of eco-friendly processes to gain competitive advantage would be rather simplistic.


Their activities go beyond the simple manufacturing of garments in accordance with the principles of sustainability and Circular Economy, by aiming at the creation of a proper movement to increase consumers' awareness.

According to Matteo Ward, one of the founders of the start-up, the misalignment of information among producers and customers impedes an exhaustive comprehension of the true costs of fashion industry in terms of environmental and social safety.

This asymmetry has led free hand to established firms, which have been able to act uninterrupted for years, facing little or any objection at all from the public (source: Matteo Ward at Ethics in Fashion event, 23/04/2018).

Along with this idea, WRAD is proposing to start a movement for mindful consumption, always looking for new technological innovations based on sustainable manufacturing and Circular Economy.

Summary table of Circular Economy integration achievements

 <p><i>Use of recycled and non-harming graphite in the dyeing process</i></p>	<p>Designing Out Waste</p> <ul style="list-style-type: none">• Drastic decrease of water and energy consumption in the dyeing process• Elimination of harming and toxic leftovers in the manufacturing process <p>Renewable energies</p> <ul style="list-style-type: none">• Use of both clean energy and organic inputs throughout the manufacturing processes <p>Think in Systems and Cascades</p> <ul style="list-style-type: none">• Creation of an international movement for sustainability, based on thoughtful consumption and technological innovations
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3.2.3 Out-bound Logistics

Applying Circular Economy to a firm's distribution system, intended in particular as the storage of items at production sites, warehouses and retail points, may be quite a remarkable challenge. This phase has a linear shape by definition: goods must move through the different steps in a specific order, as to guarantee continuous efficiency and rapidity.

Nonetheless, there are some measures and precautions companies might and should apply in order to ensure a much cleaner and eco-friendlier activity set-up.

The boost from Institutions

The CNMI (Camera Nazionale della Moda Italiana, the Italian National Chamber of Fashion) – in collaboration with the Centro Studi per la Sostenibilità Applicata, the National Institute of Bioarchitecture and the Associazione Tessile e Salute – has decided to draft a series of responsibility principles, aiming at drastically change the impact of business without disrupting the existing activities.

These guidelines do not have a standard timeline, but they may be applied in accordance with a company's own strategy and budget allocation (source: Camera Nazionale della Moda Italiana website, “Principi CNMI per la Sostenibilità del Retail”).

In 2012 the Manifesto per la Sostenibilità was published with the primary aim to help entrepreneurs embarking on a viable path towards sustainability.

According to the CNMI, this becomes possible thanks to the adoption of specific management models throughout the value chain, as well as to the application of dedicated guidelines and benchmarks for strategic and operational decisions.

By seizing all the opportunities offered by a careful analysis of the social and environmental externalities of their activities, firms are able to manage, master and exploit reputational risks turning them into favourable chances.

As it has been already mentioned, the document covers not only topics related directly to the value chain steps, but also matters impacting on the company in a cross-cutting way.

The subjects addressed in the Manifesto cover all the steps fashion firms must go through in order to successfully develop their business.

The application of responsible practices must embrace all the activities carried on by a company, as to guarantee the comprehensive integration of sustainability in its values and mission.

The key features to focus on are, therefore:

- The design of product: items should be conceived as high-quality and long-lasting, as to minimise the negative externalities produced throughout their life-cycle
- The choice of raw materials: inputs must be safe and traceable in order to safeguard consumers and assure well-made garments
- The planning of manufacturing activities: all processes are to be tailored to diminish both environmental and social downsides and to maximise the value added at each step
- The activities of distribution, marketing and sales: the objective is to include sustainability during the entire life-cycle of the product, from the factory to the final consumer
- The managerial organisation: responsibility needs to be fully integrated in the decision-making and operational provisions of the company
- The support of local players: building networks of partners and clients helps to increase the excellence of the Italian industry
- The application of ethical norms and transparency: a well-rounded incorporation of ethical standards in the mission of the company is essential for the complete conversion towards sustainability
- The investment on education: sustainability and ethical practices are to be spread among stakeholders and counterparts, in order to raise awareness and demonstrate commitment

This is only one of the main actions portrayed by the Chamber: in 2012 the Manifesto per la Sostenibilità opened the way for the set-up of more responsible businesses, while later it focused on the safety and quality of the raw materials involved in the textile supply chain. Moreover, further indications on the correct usage and disposal of chemicals throughout the production process are to be defined, as to embrace all the possible externalities of the business. Several fashion firms - such as Prada, Ermenegildo Zegna, Salvatore Ferragamo, Giorgio Armani, Gucci and many others - have contributed to the work of CNMI, providing insights and suggestions to reduce negative effects caused by plants and facilities and to improve the work environment for boosting the overall quality of the textile business.

In the words of Carlo Capasa, President of the CNMI, this attitude is to be seen as another step in the long path towards a more sustainable fashion and to transform sustainability itself into a key feature for the Italian filiera.

The Prada case

The Prada Group, one of the global leaders in the luxury fashion industry, may be brought as an illustration of effective transition from traditional business to responsible practices.

Prada moved its first step at the beginning of the XX century, when Mario Prada, founder of the brand and family patriarch, opened the first luxury bag and accessory store in Galleria Vittorio Emanuele II, one of the most beautiful and characteristic spots in Milan.

It is not long before Prada becomes an established name in the luxury landscape, thanks to its product excellence, characterised by a sophisticated design, an accurate selection of prestigious materials and an impressive care for details.

A decisive turning point in the company managerial practices took place in the 1970s, when Miuccia Prada – Mario’s granddaughter – and Patrizio Bertelli joined forces to launch the group at an International level.

Thanks to a clever combination of creativity and visionary entrepreneurial attitude, they succeeded in a global perspective. Throughout the years, they have expanded the selection of products proposed: not only leather goods, bags and accessories, but also shoes and clothes for both women’s and men’s collections.

At the present day the activities of the Group also entail eyewear and perfumes and Prada has recently started to invest in the food sector, with the acquisition of the Pasticceria Marchesi 1824, a point of reference in Milan’s history and culture (source: Prada S.p.A. – Relazione sulla Responsabilità Sociale 2017).

Starting from 2016, the Group undertook a series of relevant investments aiming at restoring and restructuring several productive plants and logistic hubs.

The buildings involved are located in central Italy, in the area between Tuscany and Umbria. As stated in the Ethical Code of the company, a document highlighting all the activities involved in the development of a fair and just business, the preservation of the environment plays a prominent role both in the organisational structure and in the stakeholder management.

Even though a wide range of actions is required to ensure the establishment of clean structures, the renewing activities have entailed, for the most part, the energy efficiency of the buildings.

This has been made possible by the careful selection of the resources and a total makeover of the traditional structures.

The Prada Group has particularly decided to resort exclusively to renewable energy suppliers whose actions has been certified by competent authorities.

Moreover, by maximising the use of photovoltaic technology, a complete energy self-sufficiency shall be ultimately ensured.

As yet, the operative solar installations are able to produce up to 1.2 MW of cumulative power, producing a total amount of 1232.6 MWh over the course of eleven months. The 63% of this quantity has been consumed within the buildings, while the rest has been collected to become part of the public storage.

A further step is represented by an extensive relamping project, that is to say the replacement of all the incandescent light bulbs in favour of the more efficient LED technology, with an achievement of 55% in energy saving.

Intensive investments have been made also on the constant monitoring and control of such innovations, thanks to the instalment of domotic appliances in the buildings, in order to avoid malfunctioning and failures and to be able to spot any possible room for improvement in fighting waste generation.

With regard to the new buildings, a special emphasis has been put on the creation of green areas. The objective was to increase the workers' well-being and, at the same time, respect the surrounding environment.

In the newly built logistic hub of Levanella, in Tuscany, gardens and green spaces cover more than 70% of the total surface of the structure with 1030 poplars, 35 mulberries and 1000 metres of Mediterranean hedge (source: Prada S.p.A. – Relazione sulla Responsabilità Sociale 2017).

Subsequently, in 2017, the renovation plans were widened to also embrace the redesign of offices and retail points, as part of a major commitment towards more responsible actions.

The Prada Group has defined its distribution strategy on directly operated stores, a broad network of wholesalers and an on-line channel.

At the end of 2017, the company owned 625 flagship stores located in the most distinguished fashion areas, as to underline the prestigious image of the Group.

All the shops – classical, avangardist and conventional – do not represent only retail points, but also the first direct contacts with the final consumer, who must be able to perceive the heritage of the brand. The 81% of net sales is generated through this exclusive network (source: Prada S.p.A. – Relazione sulla Responsabilità Sociale 2017).

Every shop is designed and structured to comply severe internal principles, as to safeguard the individual positioning and value of each item, and it is constantly monitored and improved.

As for the relevance of the retail stores in the activity of a fashion firm, the CNMI reports that a thought-out choice of bio-climatic characteristics, as well as the rationalisation of spaces planning and design, are able to contribute to the increase of performance in sales and to the reduction of the overall maintenance costs.

The development of innovative solutions embracing many different aspects of the firm activities - economical, technical and social - to be integrated in the existing facilities, eventually leads to the establishment of a smarter work environment and therefore a stronger and more valuable business.

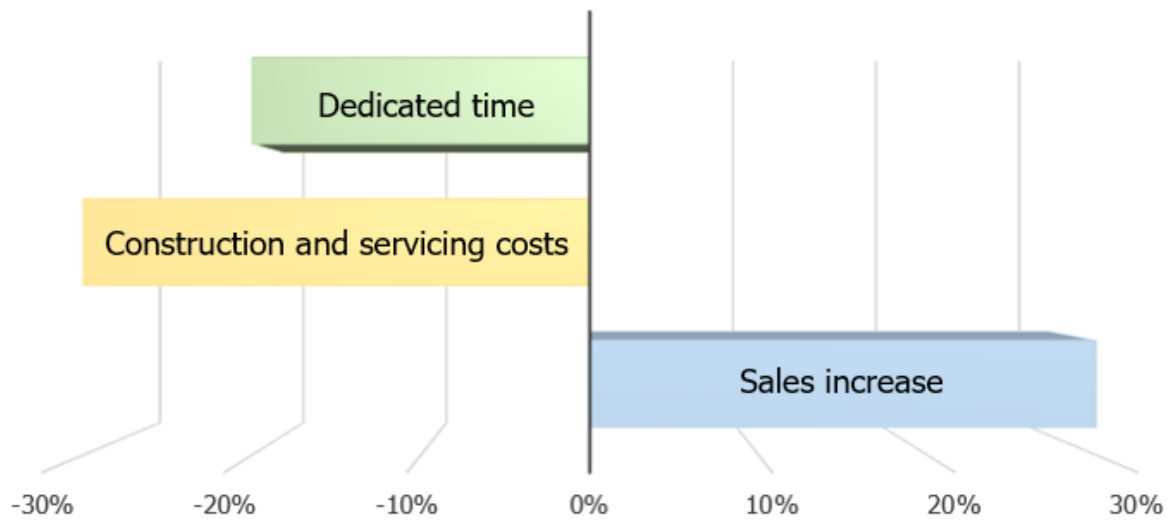
In particular, an augmentation of employees and consumers well-being during the customers' journey may lead to more time spent at the shop and therefore an increase of sales up to 30%, not to mention a higher overall satisfaction for both parties, while a more careful building project could decrease the construction and servicing costs up to 30%, as well as reducing the amount of time dedicated up to 20% (source: Camera Nazionale della Moda Italiana website, "Principi CNMI per la Sostenibilità del Retail") (see Fig. 3.7).

Among the wide extent of potential actions to be undertaken in improving the sustainability of a company, modifying and changing the design and structure of shops and stores may contribute in a substantial way to break down the environmental footprint of fashion players.

Moreover, as the retail point also represents the major link to the actual and potential customer base, highlighting a green and responsible approach towards business means creating a peculiar and distinctive mark in the fashion landscape.

By applying a sustainable approach, based on rigorous scientific norms, towards the original concept of the brand stores, expenses are expected to decrease, with an amelioration, at the same time, of sales performance and positive brand recognition and recall.

Fig. 3.7 – Benefits of Increasing Well-being in Customer’s Journey



Author’s elaboration from Camera Nazionale della Moda Italiana, 2017, Principi CNMI per la Sostenibilità del Retail [Online]

Available at: <https://www.cameramoda.it/it/associazione/news/1530/>

Shaping a Creative Future

In addition to the extensive renewal plans carried on by the Group throughout the last few years, Prada launched a series of conferences directing at a deep reflection on the interaction between sustainability and innovation in business.

The event took place on 20th-21st March 2017, in collaboration with Yale School of Management and Politecnico di Milano School of Management, and it featured the intervention of numerous global spokesmen.

The conversation had the chance to allow a free exchange on diverse themes, related to the business, academic and creative world (source: “Prada and Its Sustainable Conversation” in Luxiders.com, 2018).

During the two days of activities, four topics have been investigated, as to provide a comprehensive overview of the main motif (source: “Shaping a Creative Future” in Mip.Polimi.it, 01/03/2017).

- Brand Heritage and Market Value

The aim is to understand the relationship between the history of a brand and its commercial value by analysing to what extent consumers may be influenced by the history and origin of the company and how cultural and artistic legacy impact on brand value.

Moreover, room was given also to the preservation of artisanal competencies keeping the pace, at the same time, with the need for global expansion.

- Design for Sustainability through Innovation and Tradition

As the main objective of the project is to find the best way to put innovation and design at the service of social enhancement, during the meeting the interplay between modernity and tradition has been deepened, as well as their key role in the building of a more sustainable society.

- Sustainability and Value Creation

Sustainability, in all its expressions, must become the driver for the generation of value not only within the firm context, but also at a greater level involving customers, clients, employees and any other stakeholder. The sole greenwashing activity is certainly not enough to guarantee the respect of people and environment.

- Driving Creative Excellence




Only through the exercise of true leadership, conveyed by strictly effective managerial, organisational and financial frameworks, it is possible to achieve creativity excellence in an innovative landscape.

According to William Goetzmann, Professor of Finance and Management Studies and Director of the International Center for Finance at the Yale School of Management, creativity represents the engine of any successful business, and design is a key aspect of a sustainable future (source: “Prada: la conferenza Shaping a Creative Future” in Vogue.it, 01/03/2017).

In the same vein as the first series of conferences, the Prada Group, the Yale School of Management and the Politecnico di Milano School of Management have decided to host a second event, named “Shaping a Sustainable Digital Future” on 20th November 2018.

This time the focus will widen to embrace the «implications of digitalisation on business and societal sustainability» (source: “Prada, Yale and Polytechnic University of Milan to host event on sustainability” in FashionUnited.uk, 30/07/2018), as an evidence of the importance of the digital world in all the aspects of current businesses.

Summary table of Circular Economy integration achievements

<p>PRADA</p> <p><i>Re-design of plants and retail points to comply to sustainability principles and commitment to raise people's awareness</i></p>	<p> Resilience through Diversity</p> <ul style="list-style-type: none">• Mindful reputational management achieved through the commitment to CSR principles <p> Renewable energies</p> <ul style="list-style-type: none">• Exploitation of clean sources of energy in plants, offices and retail points• Creation of green spaces to reduce the environmental impacts of buildings <p> Think in Systems and Cascades</p> <ul style="list-style-type: none">• Strong involvement in spreading knowledge and consciousness on sustainability and its impact on current businesses
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3.2.4 Marketing and Sales

The launch of products on the market, meant as the path which starts from the anticipation of consumers' unidentified needs and ends with the provision of all the proper means to obtain the desired item, represents the core of any business-to-consumer activity.

In the past, this passage used to be linear and straightforward: each customer bought the goods, used them and eventually threw them away.

Owning more and more things was a distinctive sign of wealth and status, as who had money could afford to buy a great deal of items.

Nonetheless, as manufacturing costs decreased – thanks to the rapid industrialisation and delocalisation of factories – more people got the chance to increase their purchases.

In this way, the possession of a great amount of goods was no longer a valid indicator of comfort and financial well-being (source: “The Sharing Economy – What it is, examples, and how Big Data, platforms and algorithms fuel it” on Forbes.com, 21/10/2016).

The concept of Sharing Economy stems from the necessity to face this change in consumers' behavioural scheme.

A Sharing Economy operator, thanks to the employment of an online or mobile platform, oversees the management and coordination of a peer-to-peer market, in which consumers and suppliers have access to a bunch of collective services.

Items and utilities can be accessed through redistribution markets, that is to say goods are allocated exactly where and when they are required, avoiding any odd redundancy (source: California Management Review – Volume 58, Issue 3, pages 88-108, 2016).

It is not hazardous to say that in the future people will prefer to share, rather than own (see Fig. 3.8).

This attitude is already taking over among Millennials, and it is especially rooted in the niche of LOHAS (lifestyles of health and sustainability), groups of individuals living in urban areas who are characterised by a genuine concern about the external impacts of their actions. They possess high ethical standards, appreciate fair trade, sustainable practises and a hybrid lifestyle, combining their love for nature with a strong digital and technological competence (source: Francesca Romana Rinaldi, The Responsible Fashion Company, pages 13-14 – 2015).

Fig. 3.8 – Foreseen Increase in the Value of the Sharing Economy Market



Author's elaboration from Biagio, S., 2016. La sharing economy inarrestabile. Nel 2025 varrà 570 miliardi di euro. [Online]

Available at: http://www.infodata.ilsole24ore.com/2016/07/03/la-sharing-economy-e-inarrestabile-nel-2025-varra-570-miliardi-di-euro/?refresh_ce=1

VIC: a Very Important Choice for the environment

VIC – Very Important Choice is an Italian project born with the specific aim of building a community of LOHAS consumers, having the objective to overcome the fast fashion industrial framework by disrupting the current marketing and sales structure in favour of the set-up of a Sharing Economy scheme (source: “VIC – Very Important Choice: la moda è etica anche quando è condivisa” on Eco-à-Porter.com, 23/06/2018).

Considering the growing relevance and popularity of Sharing practices in numerous sectors – transportation of people and goods, accommodation, dedicated equipment and tools – a further step in the fashion industry seemed to be the natural consequence (source: interview with Sara Francesca Lisot, co-founder and CEO, 20/08/2018).

VIC was started by Sara Francesca Lisot (CEO) and Francesca Romana Rinaldi (marketing director) – both established and renowned professionals in the field of sustainability and fashion – on 24th April 2018, on the occurrence of the fifth anniversary of the Rana Plaza disaster, in which more than 1100 textile workers died in the collapse of a factory in Bangladesh.

This tragic event highlighted the true costs of fast fashion industry, both in terms of human lives and environmental impact, and finally awakened the Western community on the need to turn the traditional business into a more responsible one.

The insatiable consumerism and the reckless productive structures have proven to be no longer viable and opened the way for a new mode of operation in the fashion industry.

The idea behind VIC activities is the creation of a fashion platform based on sharing economy principles: by paying a fixed amount – 49 euros – per month, users are entitled of three items, be they garments or accessories, to be used and returned at the end of the period.

Sharing and Circular Economy are addressed at the same time: goods are shared among users, and the elimination of the purchase step implies the absence of waste at the end of the consumption phase. Moreover, clothes and accessories are periodically re-proposed thanks to take-back and up-cycling strategies (source: interview with Sara Francesca Lisot, co-founder and CEO, 20/08/2018).

Consumers do not buy their own items, but they simply lease them for 30 days, with a view to reducing accumulation and waste generation.

Thanks to sharing, people may be able to renovate up to 3% of their clothes without impacting on their budget nor on the environment, as dresses do not pile up in the wardrobe, but become part of a virtuous circle (source: “È nata VIC, la piattaforma di moda sostenibile” on lamiacameraconvista.com, 13/06/2018).

All the partner brands, which offer their products on the platform, have been chosen for their proved sustainability and strict ethical standards.

Aiming at applying Circular Economy on customers' side, great attention has been given to the origin of clothes, the composition of fabrics, the manufacturing process and the transparency of the supply chain, as well as the style and design of each piece.

Among the main players involved, it is possible to mention WRAD (which employs only non-toxic and recycled elements to dye its clothes), Progetto Quid (they make use of industrial scraps to produce new textile items), Re-Bello (they combine premium sustainable materials with the Italian know-how on design), Zerobarracento (that uses a strict system to certify its suppliers), while many others will certainly join soon (source: “Scelte important: VIC, Very Important Choice” on morgatta.wordpress.com, 27/06/2018).

Even the packaging in which clothes are delivered is eco-friendly, as it is made with recycled materials, and the returned garments are washed in an ecological laundry, employing

exclusively green cleaning products at low temperatures, and sanitised with a non-harming technique based on the use of ozone.

The entire organisation is lean and minimal, relying on pop-up stores instead of owned shops and showrooms, and preferring smart and co-working spaces to established headquarters (source: interview with Sara Francesca Lisot, co-founder and CEO, 20/08/2018).

VIC has successfully completed the feasibility study and a three-month service test, and it is going to be officially launched in October 2018, during the WearFair in Linz, Austria.

The aim is to offer sustainable pret-à-porter garments to an international community of smart conscious consumers (source: interview with Sara Francesca Lisot, co-founder and CEO, 20/08/2018).

According to Sara Francesca Lisot, the long-term strategy involves the establishment of partnerships with relevant players in the sustainable fashion industry, in order to increase the awareness on responsible consumption, and with institutions and Circular Economy based start-ups to grant designers the access to green resources.

VIC aims at proposing itself as a reference point for ethical open innovation, creating a network of established fashion firms and sustainable start-ups and designers (source: interview with Sara Francesca Lisot, co-founder and CEO, 20/08/2018).

In the words of Francesca Romana Rinaldi, the ultimate aim of VIC is to change the average fashion consumer's mindset, as to turn the sustainable consumption into an everyday life habit, rather than an occasional decision based on a passing fad.

It is based on the concept of *impact investment*, that is to say investing with the specific purpose of having a durable, positive, impact both on the society – as in the case of social innovations – and on the environment (source: interview with Sara Francesca Lisot, co-founder and CEO, 20/08/2018).

By building a Sharing Economy sustainable platform it is possible to overcome the niche target market issue, thanks to the increasing of the topic awareness and the brands visibility, as well as a competitive pricing strategy (source: “È nata VIC, la piattaforma di moda sostenibile” on lamiacameraconvista.com, 13/06/2018).

Though a few examples of Sharing Economy fashion platforms already exist around the world – in China the trend is rising quickly, as social-oriented groups of young consumers do not like to be seen twice with the same piece of garment – VIC surely represents a virtuous and pioneering example also from an ethical point of view.

Its primary scope goes beyond the enrichment of the offer in terms of items, but it wishes to endorse a new way of purchasing, focused on responsible consumption.

Summary table of Circular Economy integration achievements

 <p><i>Implementation of a Sharing Economy platform to reduce the environmental impact of fashion companies and consumers</i></p>	<p> Designing Out Waste</p> <ul style="list-style-type: none">• Elimination of the disposal phase by incorporating goods in a virtuous sharing circle <p> Resilience through Diversity</p> <ul style="list-style-type: none">• Implementation of partnerships to leverage responsible practices and technology <p> Think in Systems and Cascades</p> <ul style="list-style-type: none">• Building of a brand-new platform to encourage a sustainable consumption scheme based on Sharing Economy
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3.2.5 Service

The last step to be considered in the analysis of the value chain is represented by service.

Though this stage may comprise a huge variety of post sales activities, its objective is always the preservation, and, in some cases, the increase of the value embodied in the items.

This worthiness might be related to the product in its entirety or it could concern the elements it is composed of.

In the first event, that is also the easiest one to address, final users are given a number of possible solutions to dispose of their articles.

By dint of the advent and growth of online-based platforms, for example, the exchange of used items has risen sharply, allowing consumers to buy and sell their accessories with one another.

In this way, the life-cycle of each product is consistently increased, temporarily overcoming one of the most relevant issues in fashion industry.

Nonetheless, even if items pass from hand to hand several times, the problem of the disposal of materials is simply postponed, rather than being definitely solved.

Building sharing platforms – both for re-selling and donation – may contribute to limit the amount of resources exploited in the production processes, as the number of items needed to satisfy the demand would be significantly lower, but it does not represent a long-term solution in terms of waste management.

Fashion companies must take care at first hand of their product journey, providing effective arrangements to allow customers to get rid of their old goods without harming the surroundings.

This can be implemented by rising the awareness on such topics among consumers, with the help of focused partnerships and campaigns, and offering users a viable alternative to discard.

Fortunately, the habit of offering the possibility to return used items to the shops in exchange for some kind of reward – usually a voucher or a discount on further purchases – is starting to take off, and by now it is not uncommon to find chain stores encouraging such behaviour.

Nevertheless, finished products are not the only waste firms should take care of, and encouraging recycling and return practices does not suffice to assure a reduction in the overall amount of trash generated.

Opportunities in waste management

In order to overcome the problem of waste accumulation – that entails a severely negative impact on the environment in terms of carbon emissions, water consumption and pollution caused by chemicals and toxic substances – the entire disposal system needs to be re-designed. A firm action must take place in managing and dealing, in the first place, with the industrial scraps, that is to say those elements that end up being discarded at the very end of the production process.

During the manufacturing of fabrics, cloths need to be designed into precise shapes, in such a manner that allows their passage through machineries and different pieces of equipment.

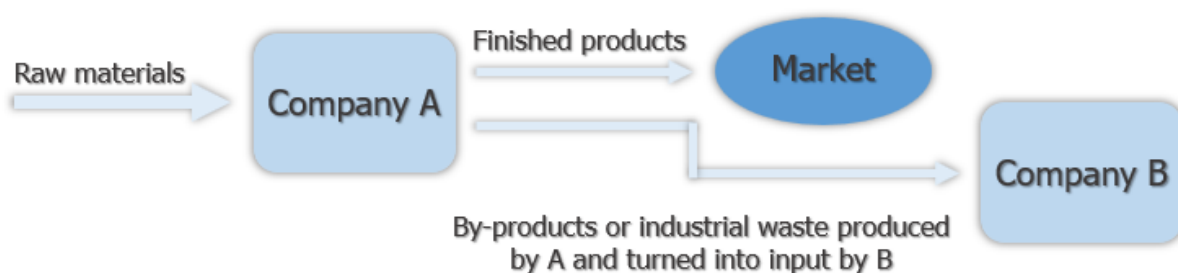
This means that, when raw textiles are processed, any spoil – mainly composed of threads, laceworks, textiles – becomes useless, and it is inevitably destined to be part of waste.

However, this requirement is not related exclusively to the industrial production of garments.

On one hand, fast-fashion industry companies demand highly automatized and mechanized processes in the assembling of final products, as to guarantee as much promptness and efficiency as possible. On the other hand, luxury firms taking advantage from artisanal methods are forced to use only some parts of the raw materials available, as their scope is to create a precious and unique item, requiring only the most exclusive elements.

As a consequence, the effective management of factory trimmings represents a crucial step in the struggle for a cleaner production (see Fig. 3.9).

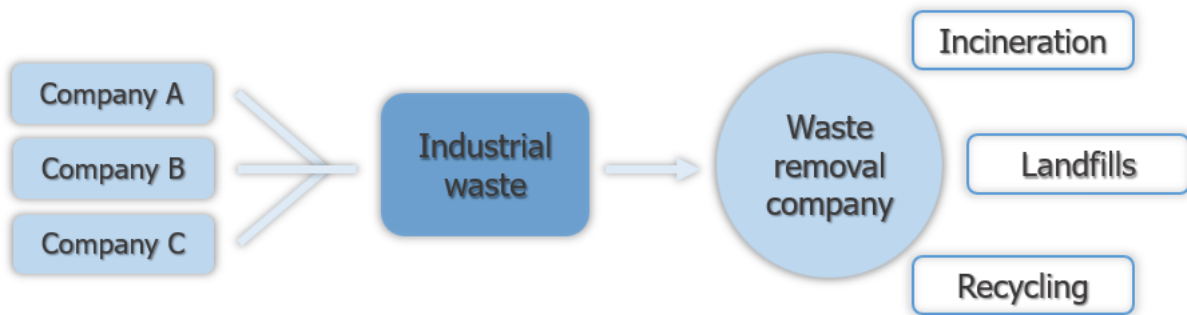
Fig. 3.9 – Output-Input Combination in Waste Management



Author's elaboration from Zaoual, A.-R. & Lecocq, X., 2018. Orchestrating Circularity within Industrial Ecosystems: lessons from iconic cases in three different countries. California Management Review, 60(3), pp. 133-156.

Firms can refer to specialised waste removal companies to take care of it, and, at the present time, three major ways to cope with waste can be identified: incineration, landfills and recycling (source: Textile Waste Recycling in TextileValueChain.com, 03/12/2015) (see Fig. 3.10)

Fig. 3.10 – Shared Waste Management Service



Author's elaboration from Zaoual, A.-R. & Lecocq, X., 2018. Orchestrating Circularity within Industrial Ecosystems: lessons from iconic cases in three different countries. California Management Review, 60(3), pp. 133-156.

In the first solution, incineration, items are burned to retrieve heat.

Even though this process has the double advantage of eliminating unneeded goods and generating energy without involving virgin materials, it presents serious downsides. In fact, the incineration chimneys continuously spill harmful substances – dioxins, heavy metals, acidic gases, dust particles – and residual ashes containing toxic elements.

Such elements are dangerous for human beings both directly and indirectly, as they pollute soil, water and air.

The second expedient, the landfill, has proven to be even more destructive.

According to several studies, fabrics decomposing in landfills are responsible for the generation of leachate, a liquid resulting from the precipitation of moisture existing in waste at its composed state (source: HBRC Journal - Volume 9, Issue 2, pages 187-192, August 2013), methane gas and ammonia.

All these substances critically contaminate surface and groundwater sources, proving to be lethal for the surroundings.

A reduction of the negative spill-overs generated by landfills may be reached by encouraging the use of organic and celluloid-based synthetics materials, as these two fibres do not contain toxic elements and are able to decay at a much faster rate than chemical-based synthetics.

The third possibility, recycling, represents the key source for a green management of waste. Luckily, 99% of used textiles are recyclable – the so-called physical recycles – in many different applications: they may return to their original scope or become part of a new productive process. Recycling can likewise be chemical, that is to say high molecular weight polymers are converted into low molecular weight substances. However, this process is costlier and more complicated, as well as less environmentally friendly, and it is therefore less employed.

As much as fashion companies can be involved in green management and technological innovation, a complete upheaval of their productive processes is nearly inconceivable.

A firm needs to keep up with competitors, to match the volatile demand of consumers and to grant enough incomes to successfully continue its activities, and a disruption in its manufacturing structure would be too expensive, if not totally impossible.

This occurrence, however, should not lead companies to ignore the issue, as it is a problem affecting their structure first-hand, and it entails everybody, from employees to top managers, as human beings.

A viable solution to ensure the smooth prosecution of the activity of firms and the preservation of value at the end of goods' life-cycle is represented by partnership.

All the waste generated by a fashion company in terms of industrial scraps could serve for raw materials in a new productive process designed to follow different objectives and targets.

A virtuous example of such transition can be found in Progetto QUID, an Italian business focusing on the reuse of disposed fabrics, in the attempt of boosting fair trade and environmental-friendly practices.

Progetto QUID: 360 degrees sustainability

Progetto QUID is an Italian cooperativa sociale, that is to say a non-profit organisation which aim is to enhance social development within the community.

It was founded in Verona in 2012 by Anna Fiscale, an Economics and Political Sciences graduate with a strong interest in social policies, who intended to bring together her eagerness in helping underprivileged individuals with an innovative approach towards the fashion industry production chain (source: Progetto QUID Institutional Website).

The decision to establish a non-lucrative association rather than a fully-fledge firm comes from a strong determination in supporting «disadvantaged and marginalised people», women in most cases, over focusing exclusively on profits (source: Giulia Houston, Ethics in Fashion event, 12/04/2018).

In fact, the primary objective of the organisation is to encourage the evolution of society, intended as the advancement of life and work conditions of the less-favoured groups to help set up a fairer and more equitable community.

Nonetheless, even if Progetto QUID does not aim at becoming a profit-oriented firm, in 2017 it was able to reach a complete safe-sustainability (source: Giulia Houston at Ethics in Fashion event, 12/04/2018).

In this specific case, social responsibility is not just an embellishment to trades, but instead it represents the core and the hearth of the business itself.

All the activities undertaken by the organisation are shaped with the precise purpose of contributing to the advancement of civil society, by establishing new standards for the community of workers and by focusing on the environmental safeguard (source: Ethics in Fashion event, 12/04/2018).

The organisation bases its business on the utilisation of industrial scraps to produce new textile items – clothes, bags, accessories – by employing disadvantaged workers, specifically trained to deliver high-quality products.

Raw materials used in the productive process are provided by textile companies installed in the surrounding territory, both as donation and at a favourable price.

In this way, companies are able to get rid of their production waste without harming the environment, nor their profitability.

As a matter of fact, waste management can be quite expensive both in terms of time and money: by giving away their excesses, firms not only serve a noble purpose by sustaining fair trade and social business, but they also end up lowering their post-production costs – recycling or final disposal.

Moreover, a partnership with a qualified non-lucrative organisation represents a fruitful investment in terms of reputational management, highlighting a strong commitment towards sustainability.

As Progetto QUID's manufactory process is mainly artisanal, and do not obey to the rule of fast-fashion collections, the cloths used throughout the production may differ in terms of sizes, patterns and textures. There is no need for them to be standardised, as it happens in regular fashion business lines, as the organisation boasts uniqueness and distinctiveness – as well as ethics and craftsmanship – as its core design signature. By using textiles characterised by such a great variety of traits, designers and tailors are able to conceive creative collections, in which

each piece of clothes is singular and uncommon, overcoming the current idea of serialised production.

Therefore, each garment comes as a limited edition, and only two collections per year are launched.

Even though all the activities are portrayed with a special emphasis on materials and design, the objective is always to reach a customer base as wide as possible.

By offering high-quality goods at an affordable price – only 10% higher than regular fast-fashion companies – Progetto QUID represents a solution accessible to everybody (source: Giulia Houston at Ethics in Fashion event, 12/04/2018).

Throughout its life, Progetto QUID has been able to establish numerous long-term collaborations with a considerable range of partners.

The organisation has been working side by side with well-known brands, by exploiting their “waste materials” as productive inputs and their stores as sales channels.

In fact, even though Progetto QUID organises its trade through branded and temporary shops, it takes advantage from the increase of awareness and exposure granted by dedicated spaces in established firms’ outlets.

By now, its presence covers 5 branded stores, 60 multi-brand stores and an online shop, launched in 2016.

Many notorious companies collaborated with Progetto QUID between April 2013 and July 2017, such as Calzedonia, Intimissimi, Altromercato, Tezenis, Diesel, Gardaland, Tocati, Canadiens and NaturaSi.

In some cases, the cooperation is based on the disposal of materials, in others – as it has happened for instance with NaturaSi – lays on the creation of specific lines of products (source: Giulia Houston at Ethics in Fashion event, 12/04/2018).

Summary table of Circular Economy integration achievements

 <p><i>Gives a new life to materials wasted by fashion firms</i></p>	<p>Designing Out Waste</p> <ul style="list-style-type: none">• Innovative business model to treat industrial scraps and sharply reduce the amount of waste generated by fashion firms <p>Resilience through Diversity</p> <ul style="list-style-type: none">• Diversification of specific activities according to the nature of partner companies <p>Think in Systems and Cascades</p> <ul style="list-style-type: none">• Reduction of the environmental impact of firms and commitment to social enhancement and personal development of employees
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Final considerations

Throughout this work, attempts have been made to demonstrate the inability of traditional linear economies to keep up with the current increase of production and consumption in the fashion industry.

Negative setbacks exist not only during the steps of the fabrication process, but mostly at the end of it, when tons of waste need to be disposed of.

This inadequacy is mainly due to a reckless attitude portrayed both by companies, often focused solely on pushing sales and cutting down manufacturing costs, and consumers devoted to an excessive devouring of resources, which are provoking severe consequences on the environment and on the society.

The task of this thesis is to understand and show:

- What the current state of business is in terms of sustainability and Circular Economy applications (**RQ₁**)
- Which the most relevant players in the Italian fashion industry are (**RQ₂**)
- What the prevailing market trends are (**RQ₃**)

Although several virtuous activities are currently portrayed in Europe, there is still some way to go to achieve completely sustainable businesses, as it entails high costs and investments, in terms of money, time and organisational frameworks.

Not all fashion firms are able to face such a disruptive approach, and most of the existing customer base is unaware of this need for change.

Before rushing headlong into these innovative practices, the spread of information and knowledge upon the topic is needed, as to grant a boost for renovation not only from an ethical perspective, but also from a managerial one.

Institutions, organisations and consumers are to be in the front row in demanding greener and cleaner practices, but, at the same time, they must change their attitudes to sustain virtuous firms in their new challenges.

It is important that fashion companies understand what they may and should change in their approach towards the whole creative and productive process – design, manufacturing, advertising and sales – in order to overcome the linear approach from resources to waste.

Circular Economy allows firms to drastically reduce their environmental footprint, by guaranteeing that none of the resources used is wasted. To do so, companies should rethink all the steps of the value chain, aiming at perfecting each activity to limit or delete the negative impact.

The final objective is to create a virtuous cycle in which resources are never taken out, but always reused and brought back to new life.

The examples outlined in this thesis represent a glimpse of how Circular Economy may be effectively applied to the various steps of the value chain in the Italian fashion companies.

The players examined, selected for their outstanding investments towards the integration of responsible actions and Circular Economy in their models, demonstrate that even small efforts, limited in quantity, can be crucial in terms of the message conveyed.

A peculiar aspect lays in the fact that Circular Economy may be integrated into a wide set of firms, independently of their size, their history and the extent of their investments. The companies presented are characterised by different business models, have different focuses, but they all have in common a strong interest for sustainability and the will to change the current pattern in their industry.

In terms of future development in the market, it is now undeniable that the resources currently available are barely sufficient to fully satisfy the actual needs of citizens.

With the increase in population foreseen in the next decades, a clever waste management will be imperative not only to avoid the accumulation of garbage, but also to recover valuable inputs for the economic activities.

By applying a long-term vision towards new productive processes, the current standards of wealth and well-being can be sustained and maintained.

Nevertheless, it is inconceivable for a single company to overcome this impasse alone.

What is needed to solve the resource scarcity issue is the creation of a network of sustainable firms – suppliers, producers, retailers – able to master Circular Economy at every level of the value chain.

A few companies, as the ones presented in this thesis, have already started to modify their actions and build strong connections for sustainability, and some others – in Italy and globally – are taking their first steps into this direction.

The contribution of each player to the enforcement of responsible practices is and will certainly be decisive to ensure a safe future for the people and the environment.

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