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CHAPTER 3

CORPORATE FASHION AND CIRCULAR ECONOMY – HOW TO MANAGE ETHICAL CHALLENGES IN MARKETING OF B2B TEXTILES

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ABSTRACT

This chapter highlights how implementing circular economy principles can help companies working with sustainability to move from a reductionist and waste management approach to marketing competitive circular value propositions that intentionally design out waste (e.g. emissions and pollution) by rethinking, reinventing and redesigning the value chain. Schijvens, a Dutch family-owned corporate fashion textile company, acts as a case for exemplifying successful implementation of circular economy principles as a marketing strategy in a sector that struggles with finding solutions to the ethical challenges of producing and marketing textile fashion. The textile industry has, for many years, been accused of production that is based on environmentally harmful processes and conditions that are not socially fair. Circular economy principles provide a range of suggestions to address the ethical challenges occurring from covering the human needs of having clothes to wear. Yet, implementing circular economy principles is not a panacea. It is not only a question of delivering a technological quick fix but also a question of managing the new processes and

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human mindset guiding the actions in the value chain. This chapter, therefore, outlines reasons for a different perspective on the traditional linear value chain and related implications managers face when undertaking a journey from sustainability based on a reductionist approach to a closed-loop approach. It is argued that implementing circular economy principles by pro-actively managing the value chain processes based on eco-centric dynamic capabilities can provide even more radical changes than the incremental reductionist approach often associated with being a green sustainable company.

Keywords: Circular economy; corporate fashion; ethical challenges; marketing management; sustainability; circular value chain

INTRODUCTION

This chapter focusses on some of the ethical challenges marketers face when managing marketing activities[1] in the global textile industry responsible for a range of non-sustainable processes, including an estimated 10% of global carbon emissions (Textile Exchange, 2014). It aims to illuminate how implementing circular economy principles as an intentional marketing design approach acts as a competitive marketing response to the grand environmental and social challenges, rather than as a waste management strategy. The dominant production and consumption patterns in the global textile industry are primarily built on a take-make-use-dispose approach with fast throughput and loss of material resources. This creates increased resource scarcity, climate change challenges, biodiversity loss, negative social aspects related to workers' well-being and high levels of waste production (MacArthur, 2017; Textile Exchange, 2014). Exemplified by the tragedy of Rana Plaza where more than 1,000 workers died because the manufacturing site collapsed (CCC, 2022), and the environmental disaster in the area around the former Lake Aral created by conventional cotton production (NASA, 2022). These aspects point to ethical challenges and necessary changes in the approach to marketing textiles and clothing.

The American Marketing Association (AMA, 2017) defines marketing as 'the activities, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large'. Additionally, the definition of sustainability is outlined by the UN Brundtland Commission as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs' (WCED, 1987). This covers a broad understanding, acting more as an aspiration rather than as a description of what to do (Stuchtey et al., 2016). Nevertheless, given the negative outcome of present production and consumption patterns, it is clear that current textile value propositions that are brought to the market destroy more value than they create – for customers, clients, partners and society at large and thereby they hamper future generation's ability to meet their needs. Thus, they violate not only the possibilities to create sustainable consumption patterns but also the purpose of marketing.

Since we as humans need to have a society that thrives in the long run, companies will need to find new ways of delivering value that do not deplete the natural environment or create social shortfalls. A major challenge related to the sustainability approach, in general, is the reductionist practice that is pursued (Stuchtey et al., 2016). Traditional corporate social responsibility (CSR) marketing strategies only lead to incremental changes that do not encourage combined stakeholder responsibility for the natural environment as resource provider and waste assimilator (Borland & Lindgreen, 2013; Pearce & Turner, 1990). To overcome ethical challenges related to current production and consumption patterns in general and of textiles especially relevant for this chapter, companies need to change the marketing approach. This means that marketers need to embrace a new mindset and a new set of activities that comply with requirements that create value for all stakeholders, including workers' well-being and the natural environment. As a response, this chapter, therefore, outlines the circular economy principles to suggest a new set of values and principles for marketing activities that companies can draw on, which embrace more ethical production and consumption patterns than the current methods, in order to become part of the solution rather than continuing the non-sustainable trajectories.

The origins of circular economy as a material balance model date back to the early 1990s and outline an economic system conditioned by the constraints of one globe with a limited amount of resources available for production and consumption (Pearce & Turner, 1990). In other words, the theory behind it is not new. However, it is only in the last decade that the concept has gained traction and developed into the mainstream discussion among academics, non-governmental organizations, governmental organizations and business managers as a solution to the grand challenges that humanity faces (EU Com, 2019, 2020). Hence, authors and researchers increasingly discuss and examine the circular economy from different perspectives such as political policies (Leipold et al., 2022), supply chains (Batista et al., 2018; Geissdoerfer et al., 2018), public procurement (Sönnichsen & Clement, 2020), business models (Lewandowski, 2015; Santa-Maria et al., 2021), ecosystems (Konietzko et al., 2020), designers and architectures (Dokter et al., 2021; Münster et al., 2022), incumbent innovation and transformation (Frishammar & Parida, 2019; Zhu et al., 2022), managerial dynamic capabilities (Khan et al, 2020; Köhler et al., 2022) and barriers/drivers (Kirchherr et al., 2018; Ritzén & Sandström, 2017).

Eisenreich et al. (2022) provide a review drawing on Porter's value chain approach that gives marketers a different perspective than the traditional linear value chain perspective. This provides marketers with a tool to approach the internal and external processes from a different perspective than business-as-usual when implementing circular principles. This chapter, therefore, intends to make marketers understand that circular approach. However, from a marketing perspective, the discussion and literature are still in their infancy. Vargo (2021) refers to the traditional linear take-make-use-dispose economy as equivalent to the goods-dominant logic. However, the circular economy principle aligns with the service-dominant logic of – for example – delivering value as a service. An

example of this is 'power-by-the-hour', as advocated by Stahel (2010) in the book *Performance Economy*, a basis of circular economy principles (Webster, 2017). Yet, Vargo (2021) is missing the highly important instrumental perspective that resources cannot be retrieved at useful levels at the end of service value delivery, without an intentional design approach, even though the services are provided in a service-dominant logic.

The circular economy has not only been praised but has also recently been criticized by a range of scholars for not being as promising as circular economy advocates claim. Scholars, for example, found reasons for how means-ends decoupling can persist over time. This refers to how companies use structural and temporal organizational arrangements to mitigate consequences of institutional pressure – in other words, how greenwashing might be part of organizational structures – now using the circular economy as a 'buzzword' without actual changes in production and marketing structures that delay more radical changes (Stål & Corvellec, 2022). Moreover, findings among practice-oriented circular economy advocates show that a narrow economic vision of circular economy lacks a reflection of political and sociocultural aspects (Zwiers et al., 2020). Yet, it is argued that the European monitoring framework and indicator development produce a collective imagination of a desirable 'circular' future – a future that will provide novel opportunities for economic growth and job creation and, at the same time, improve the natural environment measured by selected indicators. However, it is also argued that the current policies are not actually changing and using the term circular economy is only a 'rehearsal of how to imagine a reconciliation and compatibility of economic and environmental concerns that already was expressed by the terms "sustainable growth", "green growth" and "sustainable development"' (Völker et al., 2020). Further, the possibility for developing perfect circles is questioned (Corvellec et al., 2022). However, given the outline of Pearce and Turner (1990) related to the laws of thermodynamics and eco-centric managerial epistemologies (Borland et al., 2016), perfect circles are not physically possible.

In other words, an equivalent critique to the arguments by Stuchtey et al. (2016) on sustainability being reductionist and only incremental in actual change highlights that the current implementation with a reductionist Anthropocene perspective falls short on representing an eco-centric holistic, cradle-to-cradle, systems-based, closed loop, visionary approach that practically captures sustainability (Borland & Lindgreen, 2013). Since the circular economy builds on the constraints of the natural environment (e.g. 'The Laws of Thermodynamics') (Borland et al., 2016; Hawken et al., 1999; Webster, 2017) and seeks to operate within these constraints contrary to the traditional linear approach, a different managerial mindset is needed to embrace the implementation of circular economy principles. Hence, organizations and systems need a stronger focus on the human factor and the related mindset, rather than solely focussing on instrumental reductions through a technological quick fix (Borland & Lindgreen, 2013; Raworth, 2017). The intention of this chapter is, therefore, to outline a marketing perspective illuminating the suggestion that the circular economy does more than reduce waste through technical optimization (e.g. waste management). Indeed, it is rather a question of 'how to intentionally design out waste by rethinking,

reinventing and redesigning value creating processes' in order to redirect resources for recovery and utilization in consecutive cycles that contribute to restoring the natural environment by embracing radical changes in the processes of marketing textiles.

The chapter first outlines some of the ethical challenges related to current production and consumption patterns in general but also specifically for the global textile industry. Second, the circular economy principles and their application in the value chain will be described. Schijvens, a Dutch company delivering corporate fashion, is presented in the last section of the chapter to exemplify how implementing circular economy principles helps overcome ethical challenges in international marketing management. The chapter demonstrates how the company moved from marketing linear (take-make-use-dispose) products to circular textiles and showcases how to accommodate a different value proposition through a value chain transition.

ETHICAL CHALLENGES RELATED TO CURRENT PRODUCTION AND CONSUMPTION PATTERNS

Businesses not only want consumers to purchase their products but also need fast consumption of the same products at an ever-increasing rate (Kotler, 2020). Yet, the current dominant production and consumption patterns result in environmental degradation (Stuchtey et al., 2016) and shortfalls related to social justice (Raworth, 2017). This implies that an unbalance in the maintenance of global natural and social capital stocks is presently prevalent (Kubiszewski et al., 2013) as a direct consequence of successful marketing activities (Kotler, 2020). Estimates show that material extraction and related pollution to support consumption will double in the next 35 years, even though humans already use more than the planet can regenerate on an annual basis (Circle Economy, 2022). Moreover, do climate change, biodiversity loss, scarcity of arable land, ocean acidification and decreasing availability of drinking water, among others, put pressure on human well-fare in general (WEC, 2022)? This is argued to be a huge ethical challenge for marketers since the dominant approach to commercial companies predominantly utilizes advertising to develop a hyper-real world of must-have products that claim to deliver happiness and well-being (Kotler, 2020).

In 2020, Philip Kotler asked 'Is our addiction to consuming, consuming us?' He predicted that the deprivation and anxiety of the period of COVID-19 would usher new consumer attitudes and behaviours that could change the nature of today's shareholder capitalism devoted to continuous and unending growth – an unlimited growth that is not sustainable in a limited world (Meadows et al., 2005). This highlights a need to re-examine assumptions of and dependence on endless consumption, related to what is consumed and how (Kotler, 2020). Yet, what can be observed is that consumption-based carbon emissions and resource extraction rates have returned to the same level as before COVID-19 (Circle Economy, 2022). It is, therefore, fair to state that the vision by Kotler did not embed and 'business-as-usual' continues. Companies are marketing products that contribute to

worsening the grand challenges with a predominant focus on delivering value for customers, clients and partners through sales of products and services – without including the cost of value destruction at the societal level, including the natural environment.

With an estimated growth in the consuming class from 1.8 billion to 2.8 billion by 2025 (McKinsey, 2012), it is, indeed, relevant to address the ethical challenges related to marketing of goods based on assumptions of natural capital abundancy and possibilities for endless laissez-faire consumption patterns (Borland & Lindgreen, 2013). In other words, is it healthy for marketing to support a shareholder capitalism based on a perception of access to unlimited resources that supports unlimited growth? Or, will marketers be better off by changing and moving towards a state of post-consumerism that is taking a broader more including stakeholder perspective and the fragility of the planet into account? (Kotler, 2020). This chapter argues that the latter will lead to better business performance and less detrimental harm not only in the future but already in the present business environment.

Ethical Challenges in Marketing Textiles

The global textile industry increasingly receives criticism for a range of ethical challenges related to environmental degradation, poor working conditions, use of toxic chemicals, sweatshops, child labour, excess use of drinking water and harmful exploitation of natural resources. Examples of social shortfalls and poor working conditions in the global textile industry are long working hours, lack of safety measures, bad indoor climate, no access to clean water, salaries that do not support proper living standards, harassment and discrimination (Textile Exchange, 2014). As mentioned, the case of the Rana Plaza disaster, a multi-story building collapse in Bangladesh, brought attention to the poor working conditions and lack of safety measures in the international textile industry. Additionally, does the conventional textile industry have a significant negative impact on the natural environment, including water pollution, pesticide use, greenhouse gas emissions, air pollution and soil degradation? For example, does the production of one t-shirt from conventional cotton use more than 2,500 litres of drinking water? That is enough to meet one person's drinking needs for 2.5 years. Also, energy use in conventional cotton production is problematic since it is estimated that the textile industry is responsible for 10% of global carbon emissions. On top of the challenges related to initial garment production, the industry is often accused of producing way more than is being sold in the stores and online, resulting in large amounts of clothing being discarded and incinerated without ever having been used (EU Parliament, 2022). Thus, the current dominant production in, and use patterns of, products from the global textile industry are characterized by social and environmental harmful consumption processes with their linear take-make-use-dispose approach. In other words, the prevalent dominant linear economy system enhances scenarios for unsustainable production and consumption patterns, which put pressure on material resource availability, create social shortfalls and contribute to climate change potential (IPCC, 2014, 2019). Consumers are

increasingly aware of ethical challenge in international marketing management related to social and environmental problems from manufacturing and marketing textiles.

Indeed, consumer trends show an increase in willingness to buy environmentally friendly clothing (Statista, 2022). Yet, the attention to social and environmental impact from textiles is mostly focussed on fast fashion among B2C costumers and often lacks a perspective on impact from B2B relations, for example, related to providing uniforms used in service provision. It may be assumed that the B2C trend will translate into B2B settings where clothing or corporate fashion is important for brand building, just as is the case with personal branding (Belk, 1988). For example, within service provision in branded services capes like hotel clerks, cleaning service, restaurant waiters, retail and blue-collar workers, in general, it is typical to wear a uniform that represents the brand. The service provision will be part of the purchasing entity's derived demand of, for example, a zero-emission value proposition. That could consist of a 'Conference on Sustainability' that would be a conference provider with zero (or low) emission operations. Since clothing is a part of branding for a service provider, it would have a derived demand for zero-emission value proposition, including uniforms with low or no environmental or social impact. This chapter focusses on the delivery of corporate fashion in a B2B service context.

Companies that wish to sincerely address the ethical challenges in the textile industry, therefore, need to think beyond compliance through CSR initiatives and include sustainability in the core production and consumption of their products and services. Circular economy is an economic model that intentionally designs out waste by offering business models designed to regenerate and restore the natural capital that has been degraded by the current production and usage patterns, without creating social shortfalls. Hence, circular economy acts as a response to the ethical challenges that have not been captured by green growth and CSR strategies. In other words, while both circular economy and green growth/CSR seek to have a positive impact on the environment and society, circular economy has the potential to have a fundamentally larger positive impact through a systemic approach, rather than green growth/CSR that have a more limited focus on specific activities, maybe not even related to the company's production and marketing operations (Stuchtey et al., 2016). Circular economy with its systemic perspective, therefore, offers a more holistic approach to marketing value propositions, which aligns with the definitions of marketing and sustainability and provides practical solutions to the ethical challenges in the global textile industry. The following section will introduce the circular economy principles and outline some of the major shifts a company's value chain needs to undertake.

CIRCULAR ECONOMY – A RESPONSE TO TACKLE ETHICAL CHALLENGES IN MARKETING MANAGEMENT

A circular economy outlines a production and consumption system that by intention restores and regenerates the natural capital for present and future

consumption possibilities. A circular economy operates by default on renewable energy, eliminates the use of toxic substances and minimizes leakage to landfill and incineration (MacArthur, 2013). Hence, a circular economy keeps products, materials and components at their highest utility at all times through design processes that enable material flow to maintain operational value in consecutive use cycles. Thus, it provides opportunities for innovation across professional fields such as product design, services and business models in order to establish a framework and building blocks for a resilient system able to work in the longer term (Webster, 2017). To provide pure and valuable return flows for consecutive production and consumption cycles, products should be designed to enable disassembly into either technical or biological nutrients (Fig. 1). Technical nutrients are homogenous materials, typically iron, copper, plastic, aluminium and glass, which are by definition finite in stock. Biological nutrients, on the other hand, are of a more heterogeneous character, for example, food waste, textiles made from cotton and products made of wood in general, which are by definition renewable if nutrients are returned to the soil to regenerate natural stock (Braungart et al., 2007; Hawken et al., 1999; Lovins et al., 2007). In other words, technical nutrients roughly comprise what humans excavate from within the ground (e.g. mining), while the biological nutrients are those that are grown on the ground (e.g. utilization of land). Since companies do not operate in a vacuum, and in order to make technical and biological nutrients flow effectively, it becomes essential for companies to introduce a different approach to collaboration with stakeholders with the aim to create restorative production and consumption processes (Baron et al., 2018).

The basic premise is minimizing leakage to landfill and incineration (e.g. design out waste) to avoid loss of resource value through focus on product life

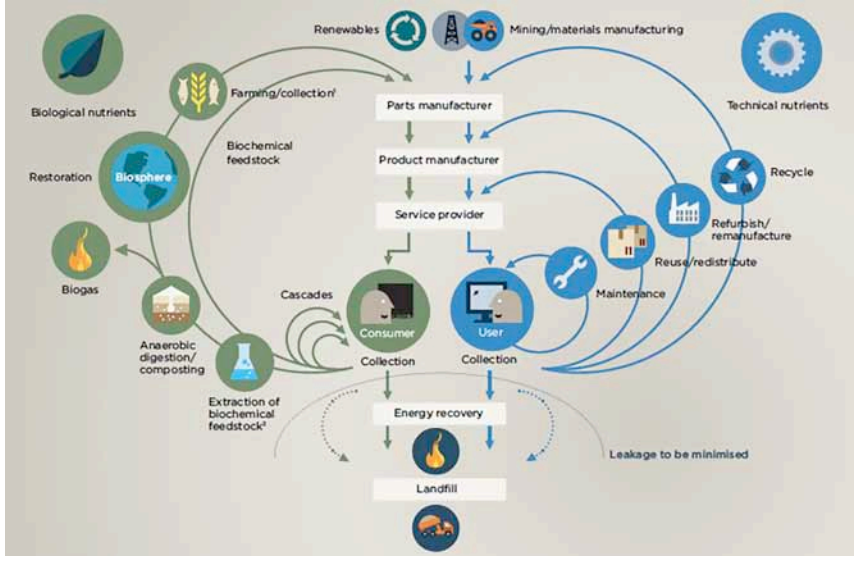

Fig. 1. The Ellen MacArthur Foundation's Butterfly model (MacArthur, 2013, 2015).

extension and/or closing the loop (Bocken et al., 2016; Webster, 2017). This requires firms to initiate processes that support longevity, renewability, reuse, repair, upgrades, service, capacity sharing, dematerialization, refurbishment and design for disassembly (MacArthur, 2013, 2015). For the technical cycles (Fig. 1), maintenance is considered more desirable than reuse, and this is considered to conserve more resource value than remanufacturing, compared to recycling which is the least attractive resource recovery option. Concerning the biological nutrients, the most important aspect is to return nutrients (e.g. phosphorous and nitrates) to the soil through anaerobic digestion for future biological production. A by-product from this process is biogas, which often is considered part of the circular economy. However, this is a conceptual misunderstanding since burning gas for energy production means that the nutrients are lost and waste is produced (e.g. carbon dioxide emissions); biogas is considered a linear biproduct of circular economy processes.

A circular economy is, therefore, also considered more labour intensive than a linear economy because of the inclusion of maintenance, repair and disassembly as a standard (Stahel, 2013). Hence, it is anticipated that a circular economy creates more jobs compared to linear business as usual (Stuchtey et al., 2016; Webster, 2017). The social aspect is, therefore, indirectly incorporated in a circular economy, by securing meaningful workplaces in more sustainable and competitive businesses. This is argued to create a market, in general, that values regional job creation, securing the social foundation of life (i.e. income), mitigating material value loss (i.e. regenerative) and reducing greenhouse gas emissions from production processes.

Based on this is a circular economy defined as:

> an economic system that is based on business models which replace the 'end-of-life' concept with reducing, alternatively reusing, recycling, and recovering materials in production/distribution and consumption processes – thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations. (Kirchherr et al., 2017)

Even though it is acknowledged and important to emphasize that individual products will not create a circular economy – it takes a system perspective to embrace – this chapter will limit its focus to the micro-level related to products, companies and consumers.

Circular Economy and Textile Recirculation from a Technical Perspective

Given the huge loss of value and other related ethical challenges in the textile industry as described earlier, it is relevant to outline how to increase circularity in textile material flows in order to mitigate the loss and offset initial harmful production. In other words, this chapter describes how the textile industry can rethink product and process design to intentionally enable higher value capture and lower the environmental impact through the use of circular economy principles. Generally speaking, it is argued that a circular economy for textile/fashion creates

better products and services for customers, contributes to a thriving and resilient sector and regenerates the natural environment. Rights and equity for everyone involved, also for nature, are prioritized and new solutions should build on diversity and inclusiveness, because products are made from safe and recycled inputs, used for a longer period and designed to be recycled (MacArthur, 2017).

From a technological process perspective, recycling entails different approaches depending on the materials used. Ideally, all textiles and clothing should first be cycled through the technical cycle loops (e.g. right hand side of the Butterfly model) by reusing, repairing, remaking and recycling. However, if this is not possible due to poor design and/or poor garment quality that hinders technical processing, or if the used garments are worn out, the clothing can be treated in different ways. Roughly speaking, garments are made out of mono-fibre materials or mixed fibre materials. That includes pure natural fibres like cotton/wool, pure synthetic fibres like polyester/polyamide or mixed fibres – for example, cotton and polyester in the same product. The choice of material composition has a direct effect on the processes and possibilities for recycling (Münster et al., 2022).

Ideally synthetic and natural fibres should be kept separately (e.g. as mono materials) or at least be easy to separate at the end of use (Fig. 2). The items should be produced purely with natural fibres like pure cotton or pure wool (e.g. not mixed and non-toxic) for the biological cycle or made out of pure polyester for return treatment in the technical cycle. Using mono materials allows for the mechanical recycling process at the end of use, which is the simplest and least energy-consuming process for recycling garments (MacArthur, 2017). If the textiles are made from mixed fibre materials, the only possibility for keeping the materials in the loop is chemical recycling, which is more energy intensive than mechanical recycling. Nevertheless, chemical recycling is a viable approach since chemical recycling maintains fibre quality, which is not the case with mechanical

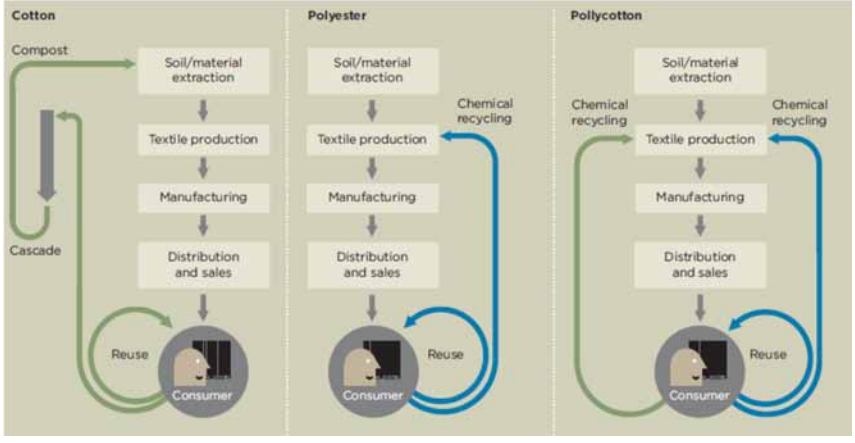

Fig. 2. End-of-Life Material Pathways for Natural and Synthetic Fibres (MacArthur, 2015).

recycling. This means that additional virgin fibres are needed to weave new garments. Chemical recycling can also be used for recycling pure synthetic fibres, yet since this process needs more energy, mechanical recycling is often preferred. The most common solution for garment design is, however, mixed fibre materials, which challenges the return flow possibilities; this is described as systemic and technical contamination that will lead to either down cycling and/or disposal, thus hindering circular processing and resulting in a loss of value and loss of resources for future consumption possibilities (Baxter et al., 2017). Structuring a circular economy product and process design is, thus, a central managerial task to obtain effectiveness and value capture, without contributing to the grand challenges outlined in the introduction.

Managing a Circular Economy Value Chain

Benefits from applying circular economy principles for companies arise from potential improved strategic positioning and a decrease in operational costs through the improved design of processes and maintaining control over materials to support closing the loop for input in the next production process (Lieder et al., 2017, 2018). For example, back casting and eco-design approaches are suggested for how companies can facilitate transformation towards circular economy business models (Heyes et al., 2018). Practitioners have demonstrated how sustained circular economy business practices deliver resource productivity, new revenue and business continuity advantages. Moreover, the transition towards circular economy demands cross-functional leadership responsibilities and requires managers to develop capabilities and competencies to handle complex and highly dynamic factors (Köhler et al., 2022). Hence, implementation of circular economy at the micro-level requires changes in most existing manufacturing processes and management of business models, which forces disruptive rethinking along extant value chains (Eisenreich et al., 2022; Esposito et al., 2018). This can be captured by managers that embrace eco-centric dynamic capabilities encompassing the ability to *sense* changes in the natural and business environment, *seize* new eco-centric business opportunities that do not damage the physical environment and *reconfigure* the ecosystem to allow for products to be designed for separation in technical and biological materials. *Remap* is the ability of managers to envision products and materials as input in new products and *Reap* is the ability to create financially profitable circular material flows.

It should be noted that implementation of the circular economy principles and eco-centric dynamic capabilities in an existing value chain, or being an entrepreneur with the desire to embrace a business model embedded in a value chain for circularity, is not a panacea. Due to the intentional design for consecutive use-cycles and the complex interconnectedness with diverse stakeholders, companies are often unsure of how to implement and consider the effect of circular solutions on their organization (Eisenreich et al., 2022). For example, research shows that circular business models carry significant challenges for proactive uncertainty reduction for the entrepreneur (Linder & Williander, 2017). Further, organizational environmental culture, lack of government support, prohibitive

and counterproductive legislation followed by administrative burdens, lack of information and divergent support from supply and demand network have been identified as key barriers (Rizos et al., 2015). Moreover, financial, structural, operational, attitudinal and technological barriers hinder integration of circular economy principles (Ritzén & Sandström, 2017). Implementing circular economy at the micro-level does, therefore, hold both potential and challenging obstacles that affect how businesses are able to incorporate the principles effectively in a holistic marketing approach.

It is argued that circular supply chains are concerned with 'the configuration and coordination of the supply chain to close, narrow, slow, intensify and dematerialize resource loops' (Geissdoerfer et al., 2018). Yet, from the company's competitive perspective, the supply chain approach by Geissdoerfer et al. (2018) takes a narrower view than Porter's (1985) traditional and well-known holistic value chain understanding that takes a processual competitive perspective (Eisenreich et al., 2022).

Thus, Porter's linear value chain model provides a holistic process perspective on corporate activities and structures them into functional units. The model was developed to identify competitive advantage derived from the company's primary and secondary (support) processes. However, a literature review structuring circular economy along Porter's value chain found that the traditional linear process approach (e.g. primary and secondary activities) is not sufficient to reflect circular business practices. A circular value chain (Fig. 3) is, therefore, proposed by adapting the traditional management perspective of a company's operating model to circularity (Eisenreich et al., 2022).

The literature review found that one extra activity should be added to the five primary activities from the original model – that is reverse logistics and recovery. The following section will not go into detail on all the aspects found by Eisenreich et al. (2022) but will select and outline important aspects related to the core of the model *Innovation & Technology, Procurement, Firm infrastructure* and *HR management*. This is relevant for the reader to gain insights that relate to the case of Schijvens.

Innovation and technology focus on the development of reverse logistics that according to Eisenreich et al. (2022) can be established in three ways – first, internal development of reverse logistics; second, through partnerships with external stakeholders and third, material collection purchased on the market, for example, through waste managers. The feasibility of these recovery possibilities largely depends on close cross-functional collaboration throughout the life cycle of the product, especially after-use processes. It is paramount to enable traceability of materials throughout the life cycle of products for use of Industry 4.0 technologies like block-chain.

Procurement is concerned with operations where it is found that in order to achieve sustainable circular economy effects, material efficiency in manufacturing should not be considered in isolation, but instead extended across the whole product life cycle. Further, control and monitoring of manufacturing should not only be restricted to a financial/monetary view but should include and balance process metrics related to mitigation of environmental harm and social shortfalls.

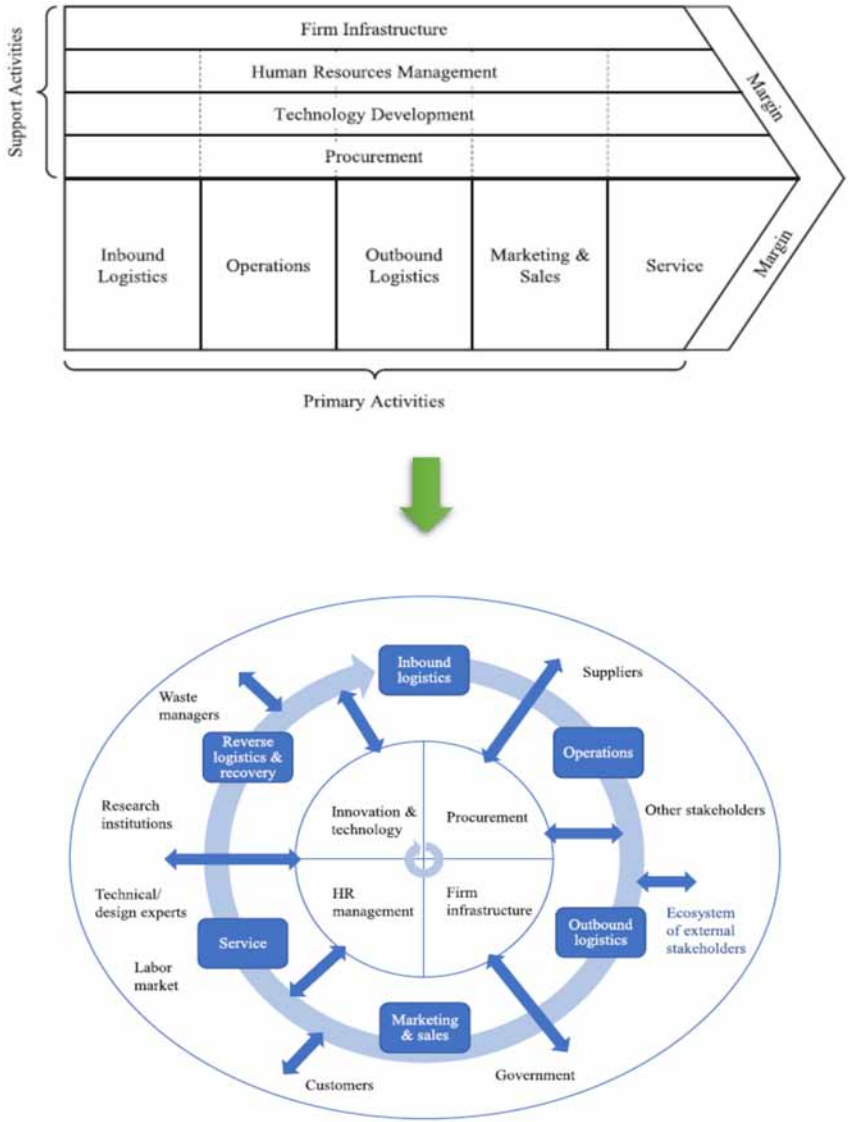

Fig. 3. From Linear Value Chain to a Circular Value Chain Framework (Eisenreich et al., 2022).

Firm infrastructure can be related to both outbound logistics and marketing/sales. It is argued that outbound logistics should take an ecosystem perspective, for example, through cooperative stakeholder networks to combine different modes of transportation. Moreover, it is argued that companies should promote environmental and social circular economy values as unique selling propositions

and it is recommended to actively involve customers in circular economy practices. The latter is deemed essential for the system solutions to operate effectively. The purchasing decision can be guided by the higher environmental value associated with the price. Commitment from top management as part of firm infrastructure is found to be essential in the process to adopt and implement circular economy principles. However, the latter do, of course, overlap with HR managers' approach to recruitment and perspective on the approach to customer engagement.

Implications of implementing circular economy principles on HR management are quite large, but often overlooked, as there is a tendency to perceive the technological quick fix as being enough when talking about implementing processes to enhance material circularity. Yet, it is argued that HR management related to implementing circular economy principles is highly important since circular economy solutions often are more labour intensive and, thus, also immediately more costly if not handled properly. New skills might be required; innovation of work processes, capabilities and corporate culture should support keeping products and materials at their highest value.

To illuminate how to accommodate implementation of circular economy principles in the value chain, the following section showcases how the Dutch company Schijvens transformed the company value chain from a linear economy approach to a circular economy approach.

SCHIJVENS' RESPONSE TO ETHICAL CHALLENGES IN MARKETING CORPORATE FASHION

Schijvens corporate fashion is a Dutch family-owned business dating back to 1863 that is designing, manufacturing and marketing corporate fashion for the hospitality industry, retailers, logistic companies, restaurants and construction firms. The company acknowledge that the textile industry is one of the most polluting industries in the world and Schijvens, therefore, strives for reinventing corporate fashion by implementing circular economy principles (Schijvens, 2022a).

A team of 40 people works together in The Netherlands delivering high-quality design, production and marketing of uniforms with a strong focus on being socially and environmentally sustainable. Customers include Qatar Airways, McDonalds, Leen Bakker and Ricoh (Schijvens, 2022b). The company has a long tradition of working towards making corporate fashion collections more sustainable, and in 2017, Schijvens reinvented manufacturing processes in order to market circular corporate fashion. During the last five years, Schijvens collected almost 900,000 items for recycling, saving 96% of water consumption, 20% CO_2 and 35% energy on average per item (Schijvens 2022a). On top of starting to collect clients' used corporate clothing and use it for production of new uniforms, the company additionally redesigned the value chain to enhance circularity, using recycled yarn made out of 50% post-consumer textiles and 50% recycled polyester (e.g. PET bottles). Moreover, the company is the category leader in the Fair wear foundation on complying with social sustainable labour condition. For

example, Schijvens now pay a living wage to suppliers' working staff and not just a minimum wage.

Rather than only focussing on reductions in their internal operations, Schijvens developed what they call the R-ladder to enhance return of high-grade products to the value chain. It is suggested on their homepage to use the R-ladder as a guideline to customers for keeping the value of products as high as possible. The ladder enables customers to choose between seven different options connected to specific R-strategies via a digital platform, encompassing re-use, re-cover (both cleaning services), re-pair, re-fuse (if ordered by mistake), re-claim (complaint handling), re-cycle-box and re-cycle-rolcontainer (both for worn out products). The cleaning services allow companies to get clothes cleaned and either reused by employees or returned to Schijvens' stock if the employee leaves. If an item is damaged, Schijvens Corporate Fashion offers repair service, which is cheaper than buying new. Customers can re-fuse incorrect orders and return with no cost. Re-fuse could be considered not buying at all, but in a world where it is expected that service providers dress in corporate uniforms, it is not an option considered here. Re-claims can be made and the company have a transparent process for complaint handling. Five of the outlined R-strategies help customers prolong the life of garments during usage as a service, which is of importance to reduce the overall impact from textiles. However, that does not necessarily lead to regenerative and closed-loop production of new garments. Yet, the two last R-strategies: re-cycle-box and re-cycle-rolcontainer, address this issue by focussing on recycling (Schijvens, 2022c).

For recycling used garments, collections take place in collaboration with close partners PostNL and Dobbi, ensuring organized return logistics. Customers collect used clothes in boxes and/or containers that can be ordered on Schijvens' digital portal for servitizing return logistics. Collection of used garments is not limited to the company's own products but includes collection of other brands of old textiles as well. Instead, all 'old, discarded clothing' is perceived as raw material for new clothing. The recovered garments are brought to Schijvens' own distribution centre in Hilvarenbeek where clothing is sorted, treated for shipment, bundled and registered. Used garments are collected and shredded. Post-consumer polyester items like fishing nets, polyester clothing, sportswear and PET bottles are turned into granulate, which is heated and pulled into strands that become polyester fibres for production of new garments (Schijvens, 2022c).

Since recycling and production of new garments from recycled content take place in different countries, the company needed to trace every item in the full cycle. In order to increase transparency and avoid greenwashing, the company chose to collaborate with Aware™. This is a method that traces and authenticates the recycled materials used in every product, to create as much transparency as possible. Using Aware™ allows Schijvens to use a secure open source blockchain system to ensure that recycled materials that enter the supply chain are also the materials actually being used in the products. Practically, Aware™ fibres added to/mixed into the recycled polyester fibres and recycled traceable yarn spun from the wick can then be used to produce new recycled fabric woven from the recycled material. Through the patented tracing technology, the final product can then be

scanned to verify that the materials used were the ones registered as production input. Every item is, therefore, scanned, and the confirmation is linked to a digital token stored on a block chain. This includes a Certificate of Authenticity, which is then transferred to the customer company's digital wallet, transparently documenting environmental savings (Schijvens, 2022d), enhancing trustworthiness in communication and brand-building.

In order to capture the value of recycling materials, develop international return logistics and avoid expensive customs at the border, Schijvens together with Gama, a Turkish textile company, designed and built a machine for processing post-consumer garments. To comply with Turkish import regulations, the used clothing needs to be 'destroyed' for further use. The new machine, therefore, shreds the used garments before they are registered and bundled for shipment. Additionally, a special permit is needed in order to import clothes to Turkey, a permit that Gama holds. Partnering up with other than traditional stakeholders was, therefore, important for Schijvens to ensure a closed-loop production. Likewise, having production facilities in Turkey and in other international locations challenged the traditional supply approach. Schijvens believe that good working conditions are essential for sustainable production. At the same time, a different approach compared to traditional textile production was needed when implementing circular economy principles and controlling the processes. In addition to partnering with Gama to comply with the trade requirements, Schijvens, therefore, additionally redesigned their transactional supply chain to a value chain of exchange.

In order to facilitate the implementation of circular economy principles in the value chain, Schijvens performed three important strategic action, which were necessary to honestly and transparently market circular corporate fashion. As an overall condition, Schijvens believes that it is essential that people work under good condition.

> As the fifth generation, our sights are inherently on the future to ensure that we can be proud when we hand the world over to the next generation. As a family business, we also see all our partners as family. (CEO, 2018)

Therefore, to enhance workers' conditions and transparency, the company became a member of Fair Wear Foundation, and all factories are under their supervision with a score of 97 out of 100. The journey towards becoming the category leader within sustainable corporate fashion and winning the best practice award entailed a reconfiguration of their international value chain. During the process, they learned some valuable lessons that will be outlined in the following paragraphs (Schijvens, 2022e).

First of all, Schijvens bought a factory in Turkey, both because production in Holland was too expensive and in order to reinforce entrepreneurship in the company's approach to marketing environmentally friendly products. It was not a question of finding the cheapest production site abroad, more a question of being competitive through entrepreneurship, finding a like-minded partner in another country and also making sure that all employees would receive a living wage. Schijvens found that partner in a Dutch-owned company UFS with the

production facility in Turkey that was acquired and together they worked hard to improve labour conditions.

> We have improved a lot on health and safety over the last 5 years. Fire escapes, fire drills, technical specifications for the building, the way we pay the salaries. It is all by the banking system (e.g. not cash in hand). And the biggest step that we have done is the introduction of living wage. (CEO, 2018)

This shows the commitment of Schijvens' engagement in embracing a sustainable value chain.

The second step and maybe most important step was then to find the right level for a living wage. A living wage is the income necessary for the worker to meet their basic needs and save a little. This mean that a worker should be able to afford food, rent, healthcare, education, clothing, transportation and savings. 'When we decided to go for a living wage, we first asked Fair Wear to help us. On the other hand, we also asked the workers: What do you need for a salary? What do you need for medicine? What do you need for education? What do you need for food? What is your transport cost? What is your housing cost? So, they took home the list and they brought it back to the factory. Simple as that!' (CEO, 2018). After involving factory workers and management, Schijvens calculated that the workers needed a salary increase of 500 Turkish Lira per worker, which would increase the cost of garments on average by €0.25. Nevertheless, Schijvens started paying the living wage almost immediately and postponed the discussion on who should bear the cost, the company or the customer. Eventually, Shirley Schijvens, the CEO, stated that

> if you create awareness, also the customers are going to feel responsible, and they can also add something to the cost price in the end. But we decided not to ask them immediately, because it is our responsibility. We like to take our own action. After we asked them to be involved.

On top of paying a living wage to internal employees, Schijvens also decided to pay a living wage in the full value chain.

> It is easy to make this project work, because it is our own factories. However, we decided not to stop there. But, to move forward with the factories we don't own, because we still have 75% of our production in other factories around the world. So I think within a year we will also have the living wage in our factory in Pakistan. (CEO, 2018)

Hence, creating local sustainable jobs with higher standards than the overall industry standard can become a competitive advantage for the company when advertising vacancies, highlighting how the company proactively reconfigured the value chain in order to address ethical challenges in marketing related to international production chains.

The third strategic action that the company undertook was educating employees on the circular economy principles and sharing information on margins in the value chain for all stakeholders to see where value is created and how the outcome is distributed. Early in the process, it became clear that sharing expertise within the value chain was necessary to increase the quality of the recycled material in the production of new garments. Since the concept of circular economy is fairly new to many people, it took a proactive effort from Schijvens to make employees

understand what the circular economy principles were about. For example, why careful and correct treatment of 'old' textiles is important to enhance the quality of the recycled product. A quality aspect is essential if Schijvens is still to be competitive in the future with the new circular value proposition. Moreover, Schijvens provides a spreadsheet with clear cost price calculations, which make transparent to the producers and customers the extra cost of paying the living wage and producing according to the circular economy principles. An example is a sweat vest cost calculation showing that the price of including living wage and circular principles adds 8.5–9.5% to the final price (Fig. 4), thus illuminating the difference in cost of producing socially responsible and environmentally friendly corporate fashion compared to the traditional take-make-use-dispose textile production.

Education and opening the books towards the value chain, thus, became essential for stakeholders to first understand the value of utilizing circular economy principles and, second, to create transparency that illuminates 'who is baking and eating the cake' in the value chain. In other words, it shows how responsibilities and profits are distributed by creating a space with full transparency. When supplier and customer bargain on transparent data to enhance customer choice for sustainability, this has been a driving factor in the development for Schijvens in implementing manufacturing procedures that enable the marketing of circular corporate fashion. According to Shirley Schijvens, the three actions have led to employees pro-actively contributing to optimizing the value chain. Thus, they make a bigger cake that everyone can eat (e.g. more value is created). Or phrased differently, this describes how the three actions and redesigning the transactional supply chain to a circular value chain process has made Schijvens experience organic growth. They sell more in general, yet, with less negative social impact and less environmental harm per item compared to before the changes were implemented (CEO, 2018).

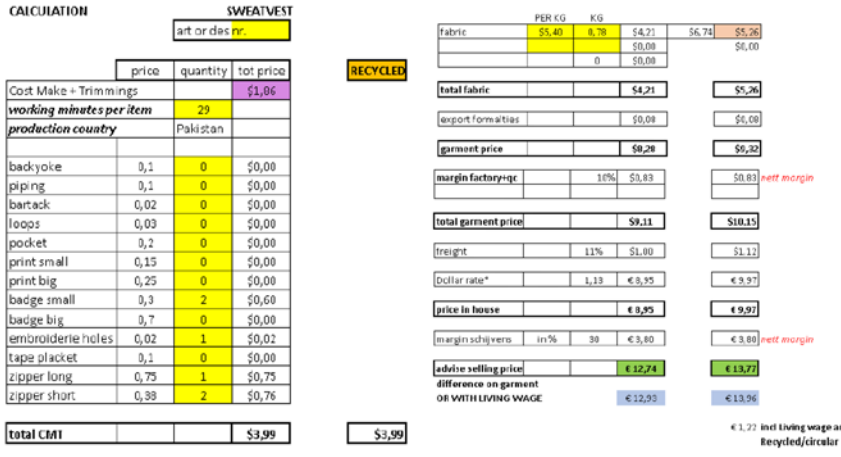

Fig. 4. Presentation by Schijvens, 2018 (Gate 21, 2019).

DISCUSSION OF MANAGERIAL IMPLICATIONS AND CONCLUDING REMARKS

The managerial implications of implementing circular economy principles in corporate fashion are manifold. The following will outline some of the most important issues related to managing the implementation of circular economy principles, as a response to ethical challenges in marketing textiles.

Compared to conventional supply chains where the focal company is not challenged by the responsibility for the product after use and does not use recycled input, did the transformation to holistic marketing based on circular economy principles create several managerial challenges for the company that needed to be handled proactively rather than reactively? For Schijvens, it was important that suppliers understood the value of recycling garments, which was challenged by a cultural norm of supplying 'new', which was considered highest value. The return logistics and the technological innovation related to the shredder machine were the physical instrumental means to achieve a closed-loop production process and marketing of 100% recycled textiles. Yet, innovative HR management approaches and a new firm infrastructure to support the new product design, related to the human factors, was just as important and the company, therefore, re-thought how to incentivize all involved stakeholders. The company managed to engage internal stakeholders and external stakeholders in an ecosystem that supports both inbound and outbound logistics and is now able to communicate environmental benefits related to water savings and CO_2 reductions as trustworthy unique selling points. Extra costs are made transparent through open-source spreadsheets showing the profit margins created and how they are distributed among the actors responsible for creating them. This means that no actor will be cheated, which creates trust and motivation among the involved stakeholders.

To handle traceability and avoid accusations of greenwashing, the company utilize Industry 4.0 technologies by use of a block-chain that provide the customer with item specific details. Hence, the R-strategies in combination with the digital token providing a Certificate of Authenticity support the feasibility of the recovery and production processes. Further, the use of block-chain also helps effective cross-functional collaboration throughout the life cycle of the clothing items by providing a non-biased system that captures any circumstances of fraud or cheating by any actor. Thus, trust is enhanced in the full ecosystem and in all collaborators without any extra effort other than mixing the Aware™ fibres into the yarn. Hence, it is fair to argue that Schijvens designed a circular corporate fashion value proposition that delivers value with less harm than the predominant textile sectors' value propositions. In other words, this is a circular economy value proposition that addresses the ethical marketing challenges that Kotler pointed to in 2020 as the biggest challenges faced by marketing at the present.

For managers does this encompass a need to undertake cross-functional leadership to redesign the value chain and develop eco-centric dynamic capabilities in order to handle the dynamics related to implementing circular economy principles?

For Schijvens did this mean the management's ability to *sense* changes related to the need for an even stronger focus on the ethical challenges related to lack of sustainability in the textile sector? *Seizing* the circular economy business opportunities meant that the company could adopt through innovating products, processes, structures and systems. *Reconfiguring* the value chain for materials led the company to embrace close-loop holistic marketing structures during production processes, consumer use and return at the end of life. *Remapping* the processes enabled knowledge transfer and material flow for consecutive production cycles and *Reaping* the benefits required paying a living wage, opening the books and sharing information on the allocation of financial gains. Hence, managing a circular value chain demands that managers not only focus on reducing, reusing, repairing, recycling and changing the regulatory framework but also be able to rethink, reinvent, redesign and redirect how both natural and human resources can contribute to market value propositions that contribute to regenerating and restoring natural ecosystems.

It is clear from the case that the value of redesigning the value chain by reconfiguring processes for material flow and financial incentives for stakeholders provides environmental savings, motivation among employees and new brand-building potential. However, the importance of managers focussing on the full product life cycle by educating customers and employees, organizing reverse logistics and recovery that fit customer operations, traceability, inventing new machines with partners and having the 'right' managerial mindset is also clear from the case of Schijvens. For example, Schijvens developed guidelines (e.g. The R-ladder) for customers to help keep the value of products and materials as high as possible at all times. Further, the partnerships with external actors on reverse logistics and inbound logistics secure easy recovery materials and provide a common platform between customer and producer where used clothes are perceived as a raw material input to new generations of uniforms (e.g. a resource rather than waste). Moreover, the new inbound logistics now also cover the broader ecosystem of producers who are incentivized through a living wage that is considered fair by all parties, which on top of knowledge sharing helps develop the 'right' local managerial mindset.

It is necessary to redesign the value chain and incorporate reverse logistics for material recovery to effectively implement circular economy principles and not only focus on waste management. Management should, therefore, educate all relevant stakeholders to understand the value of and effort needed to accomplish the circular economy principles as a physical constraint to enhance future production and consumption possibilities. In other words, relevant stakeholders like employees and collaboration partners should be made aware of the effects on both planet, people and profit. Yet, what the circular principles encompass, and not just reduction of input, in order to avoid sub-optimization from a traditional waste management approach. Moreover, the aspect of traceability has been addressed as a central challenge for the trustworthiness of circular products, which block-chain clearly in this case delivers as a nice, efficient and easy-to-manage solution. Tapping into the future with Industry 4.0, managers should,

therefore, find partners that can provide trustworthy, non-biased and transparent handling of material traceability to support keeping the value of the product/material as high as possible at all times, while also supporting the accounting processes for communication purposes and brand building.

In conclusion, it can be stated that a marketing approach designed by means of circular economy principles helps companies to keep selling with relatively fast throughput that keeps up with fashion trends, yet without accomplishing the same level of negative consumption-based emissions and related impact on the natural environment. At the same time, the approach seriously addresses and provides a solution to the producing employer's welfare, without losing competitive advantage. In other words, the case shows how companies that use circular economy principles accomplished through improved design of processes, HR management and maintaining control over materials do support closing the loop and enhancing strategic competitive positioning in the market.

For companies that wish to provide less harmful textiles, it is, therefore, not only a question of focussing on reducing material input or minimizing energy usage by means of an instrumental technological quick fix. Instead, implementing circular economy principles and pro-actively managing the value chain processes accordingly can provide even more radical changes than the incremental reductionist approach that is often associated with being a green company. It is important for the focal company to rethink management of how material streams move through the corporate value chain and that all stakeholders in the ecosystem are important to enrol in the processes. If a company has a solution that doesn't work for the recycler or any other part of the business ecosystem or value chain, the value proposition is not going to be sustainable in a circular economy system. Everyone has different stakes, yet all should move towards the same vision with every stake being important because it is the collective effort that makes the change work for everyone and not only the technological solutions. Yet, a collective effort needs to be managed, to avoid sub-optimization and to enhance effectiveness, so everyone in the ecosystem understands the ethical challenges related to marketing a circular economy value proposition.

NOTE

1. Marketing activities encompass all activities related to putting a product on a market. This includes not just advertising and communication to create awareness, but managing all the activities in a company´s value chain that contribute to delivering customer value (Hillebrand et al., 2015).

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