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A CIRCULAR LEAN CANVAS MODEL FOR COUTURELOGY VENTURES

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ABSTRACT
The aim of this conceptual research is to develop a circular lean canvas model (CLCM) for the Couturelogy ventures to meet the holistic design need of circularity, conscience, and compassion. The research methodology utilizes an exhaustive literature review and the relevant database analytics on linear economy, circular economy, lean canvas model, circular couture, conscience couture, compassion couture, consumption, digital technology, bio-technology, physical technology and sustainability. In addition, a case study on Stella McCartney brand is presented to obtain the perspective on Couturelogy. The contribution of this research provides the essential principles of circularity, compassion and conscience for the Couturelogy ventures to attain socio-economic and ecological benefits simultaneously. Finding reveals: (i) Couturelogy designers ought to use the lean canvas model based on the access principle of the circular economy, and (ii**)** the transition to a circular economy approach is enabled by the smart technologies and the transformation of entire value chain to be based on circularity principles**.** It is recommended to the Couturelogy ventures to utilize the proposed CLCM model to attain sustainability which provides precept to Non-Government Organizations (NGOs), academia, entrepreneurs, industry practitioners, policymakers to meet economic benefit and ecological development of the contemporary society. Future researchers can build on this CLCM model to examine the limitations of this model by using empirical researches.

KEYWORDS:
Couturelogy, Circular Economy, Innovations, Technologies, Circular Lean Canvas Model

INTRODUCTION

Imagine an enduring journey on a spacecraft having only one source of energy as a scarce resource. As the scarce resource depletes, the life of the spacecraft is expected to decline, unless one finds other resources needed to stay alive. Similarly, assume the planet earth as a kind of spacecraft from the viewpoint of circular economy and the purpose is to create utility, but a closed system limits that utility to sustain, unless it is organized in a circular system.

The linear economy has emerged from the 17th-century industrial revolution. Even though the demand for the world of wearables (WOW) are exponentially increasing day by day, the current linear economy principles are inadequate to ensure contemporary social development needs. Currently, more than 50 percent of the world's population (7.3 Billion) live in cities and projected to increase to 70% by 2050. The linear methods of production and consumption are unsustainable for the planet. Since cities are engines of economic growth, creating 85% (approx.) of global GDP, the quality and resource rationality becoming a critical issue. Hence, cities play an important role in the transition to a circular economy, an alternative to a linear economy (create, consume, dispose of), aims to design out waste.

Haute couture [1] or couture or fashion is synonymous with each other. Haute, meaning elegance, and couture, meaning dressmaking. A brand-new couture era is emerging with the relevance of circularity, consciousness, compassion and becoming pervasive in contemporary society. The author has coined the term "Couturelogy" to signify the integration of couture (circular, conscience, compassion) and various technologies (digital technologies, bio-technologies, and physical technologies) in this study. The Couturelogy is of great significance to raise awareness among various cultural communities globally to promote avant-garde ways to sustainability meeting the ethical criteria to curb the degradation of the environment. The couture industry has begun to unleash the potential of the "Couturelogy" based on the application of digital technologies, bio-

technologies, and physical technologies and its sustainable impact. Advances in Couturelogy are impacting both the consumer and business space and are now reaching the mass market for consumption with the smart watches being the most high-profile example with wireless networking and functionality. The challenge with the wearable gadgets is to find a value proposition. Smart watches need to add to the reasons people wear them on their wrist.

Couture creators and designers are pioneering new eco-friendly fabrics thanks to innovations in digital technology. Designers growing their own fiber spun their own thread, wove their own fabric, and sewed that into apparel. The couture brands are jumping on the sustainable bandwagon bringing the world of wisdom to the doorstep in a conscious and compassionate way. The key is to unceasingly innovate the sustainable model for the future.

The lean canvas model is an ecosystem platform of a venture that starts with an idea. Then it needs to be validated. The next step is the quick evaluation of the idea. The ecosystem needs to be formed and developers require to be selected to line up in the ecosystem. The financing capital need to be raised. A tentative launch date of the product and improvement of the product with customer feedback to be pursued.

Co-creation [2] is a new thinking to attain the important business goal of value creation. A firm is no longer the sole arbiter of value as consumers take increasingly active roles in the creation of their own value. More than ever before, companies and customers now continually co-operate in innovative and productive efforts. These ideas put the spotlight squarely on the company-consumer interface and suggest that personalized interaction between the company and consumers, as well as between consumers themselves, has become the locus of value creation. The following is the best-known value chain processes for co-creation of value: stakeholder´s revetment process - the brand like Apple, able to cut promotional costs. Why is Apple so profitable? Among many other reasons, it draws its stakeholders to market to each other. Apple doesn't have to spend marketing dollars to promote the products and services (https://www.Apple.com).

Purpose of the study

The composition of this research is as follows: (i) an extensive literature review and data analytics on circular couture, conscience couture, compassion couture, lean canvas modeling, linear economy, reuse economy, circular economy, consumption, digital technologies, bio-technologies, physical technologies, and sustainability, (ii) a case study involves in-depth investigation of Stella McCartney, a circular couture brand – Stella McCartney perspectives on the social, environmental, technological, and economic aspect, and (iii) a circular lean canvas model (CLCM) is proposed based on the above literature review, data analytics, and case study.

Study justification

So far, no academic research has investigated the role played by couture firms to develop a circular lean canvas model (CLCM), hence the literature is void of a conceptual framework. Furthermore, the historical research has failed to provide CLCM logic to recognize the dynamics of the circular, conscience, compassion couture, the application of the digital technologies and its sustainable impact. Considering the above scenario, it is worthy of attention to fill the vacuum by conceptualizing the CLCM framework for the couture market to provide new knowledge important for all stakeholders as a multidimensional opportunity for the couture market to comply with ethical, moral, and benevolence criteria's contributing to the discourse within the domain of circularity, consciousness, and compassion.

This conceptual study is important and directed towards the stakeholders of the couture industry and shall have benefit to the wider audience to understand the changes and challenges contributing to the discourse of CLCM for an enterprise relevant to two main groups:

(i) Entrepreneurs, investors, and management practitioners will be able to use to make decisions about the implementation of CLCM capabilities for the development of new or existing couture brands and other business opportunities.

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(ii) Researchers, academic faculty members, and students will learn a methodology that explores principally the keywords search, literature review, uses various databases analytics, and case studies to propose another conceptual framework research.

RESEARCH BACKGROUND

In the following section the characteristics of on linear economy, reuse economy, circular economy, overview of the couture (circular, conscience, compassion), couture inter-disciplinary domain, and lean canvas modeling are discussed:

1.Linear economy, as shown in figure 1, primarily consider the financial benefits and disregard the harmful effects to people and environment. The world economy has been 'linear' for prolonged duration and the consumption behavior has been based on a paradigmatic linear economy of "create, consume, waste." This irrational consumption behavior has been a predicament and bad situation. This worriment should be acknowledged by everyone and to be fixed. Landfills as a waste disposal option are not practical due to the vast space they require and are not ecologically safe. Incinerators are considered as an option because of their waste-to-energy application but are inefficient for many reasons. Recycling saves up to five times more energy than burning them for power ignition. The beneficiaries of the linear economy are large corporations whose business model drives aberrant consumerism.

2.Reuse economy: Where old products are used to make newer products, therefore reuse an enhancement over linear economy. For example, new paper is made reusing old paper. However, raw materials are not reused, and non-recyclable waste is produced. Since the linier approach does not consider the sustainable consumption principles, circular economy is "a rational mindset".

3.Circular economy [3]**:** The scarcity of resources has turned the concept of sustainability as a central topic for discussion. Circular Economy cope with ecological concerns and promulgate sustainability. Global economy is only 9% circular, leaving an immense powerful force for environmental mitigation.

Circular economy is not a new concept. What is new is the momentum that this concept is gaining among business practitioners. The circular economy holds its promise to a globalized economy with tangible outcomes. The concept of circularity is a tangible driver of innovations and value creation for the global economy. The following are the highlights to attain the circular economy objectives: (a) fostering wealth and employment generation against the backdrop of depleting resources, (b) circular global supply chains are the fundamental unit of action driving change and being operational in a faster pace, (c)construing materials formulations that are instrumental in unlocking change.

Four materials classifications are prime drivers for demonstrating viability: (i)well-established, high-volume recycles such as paper, glass, and steel , (ii) materials used in high volumes and lack systematic reuse solutions such as polymers, (iii) large-volume by-products of manufacturing processes, such as carbon dioxide and food waste, and (iv) innovative materials have breakthrough potential and usage cycles such as bio-based materials.

Sustainable production and consumption are essential to attain to minimize material usage and can be managed to reduce waste. It is vital to ensure that there are adequate raw materials globally for sustainable alternatives. A circular economy – zero waste model, as shown in figure 2, has emerged as an ideal initiative and has paved the way as the next best viable option for sustainability since it reduces raw material usage, promotes recyclogy and reuse. Zero waste is a philosophy that inspires the renovation of raw materials life cycles for products to be reused. The objective is to eliminate trash to be sent to the ocean, incinerators, and landfills. The process is for the resources to be reused in nature. Zero waste model is an integrated resource recovery system that changes people´s grassroots behavior for the community development globally at large. As the world becomes more aware of climate change, toxic gases, price volatility, and scarce resources, the more circular economy as a concept seems relevant. Surely, this is not a panacea for all environmental issues. The rise of the circular economy may just save us from the immense damage that is caused by plastic waste ending in landfills. Hence,

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the momentum gained by the concept of circular economy signals that we are heading toward a circular 21st century.

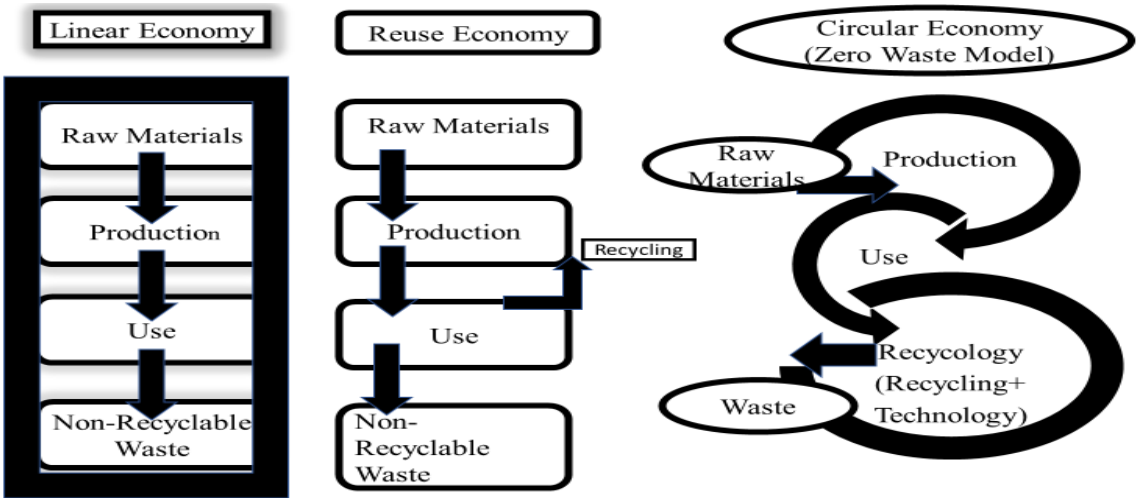

Fig.1 From Linear to Reuse to Circular Economy

The following steps are essential to achieving the circular economy objectives: (i)transformative innovation for prosperous and low-carbon industry 'Circularity Gap', (ii) closing the circularity gap serves the higher objective of preventing further and accelerated environmental degradation and social inequality, (iii) the circular transition thereby provides actionable ways forward to contribute to reaching the Sustainable Development Goals and the Paris Agreement (iv) bridging the circularity gap requires intervention across the full breadth of society and action in nations, sectors, supply chains and cities.

Zero Waste Model
with
5R principles:

Reduce toxicity material entering the solid waste stream to jounce the environment.
Reuse of resources should as much as possible
Recycology is ensured by utilizing state of the art technology to recycle all resources.
Recovery of resources or energy is achieved from the solid waste stream by utilizing technology
Residual management is essential once the solid waste stream is reduced by the application of technology.

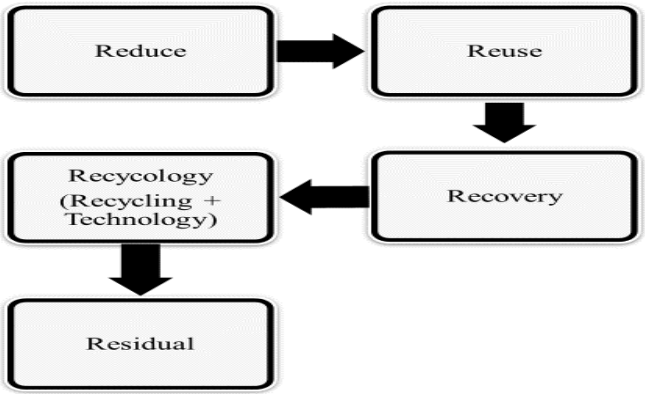

Fig.2 Zero Waste Model

The circular economy touchstone should be sharing, refurbishment, remanufacturing, reusing and recycling that empowers a radical reduction in resource use, waste, and emissions. It aims to eliminate waste systematically throughout the life cycles of products and their derivatives and can make deep cuts to emissions from heavy industry globally. Demand-side measures can take us more than halfway to net-zero emissions and hold as much promise as those on the supply side. The abatement opportunities fall into three major categories:

A. Materials recirculation opportunities and strategies could curb emissions by 178mt CO2 per year.
B. Product materials efficiency – fewer products essential to attain the same benefits and services.
C. New circular business models could yield substantial productivity gains.

4.Couture (Circular Conscience, Compassion) Overview: The author contends, as shown in figure 3, that the circular, compassion and conscience couture is at the core of the ethical, moral, benevolence and sustainable

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fashion discourse respecting workers, societies, animals and the natural environment impacting the circular economy in a significant way. Couture should be ecologically friendly and ought to relate to working conditions throughout the entire supply chain, and the environmental footprint of the fashion production process.

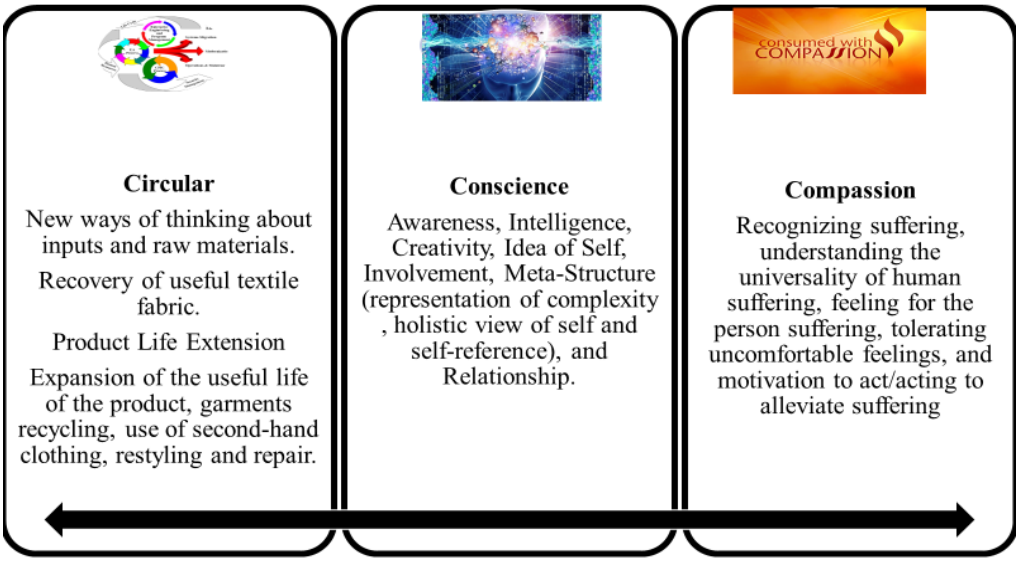

Fig.3 Couture (Circular, Conscience, Compassion) Overview

5.Couture Inter-disciplinary domain: So far, most of the literature provides a simplistic view on fashion stakeholders ethics and responsibility. To provide a clarion picture of the couture status one should identify the relevant actors and their cumulative influences. The stakeholders are the backbone of the couture industry, and they ought to take responsibility for transforming the couture industry to ethical, moral, circular, humaneness, and fashionable. There is an increased focus on making ethical products fashionable to solve the socio-cultural and ecological aspects of the fashion industry. The stakeholders of the couture industry involve the following actors, as shown in figure 4: (i) market regulators define laws and regulations for the consumer market in relation to marketing, distribution channel, materials, production etc. (ii) supplier regulators define laws and regulations for the production area in focus, (iii) consumers of the fashion industry, (iv) mediators those who are involved magazines, news media, forums, activist organizations, etc. (v) designers of the fashion wearables, (vi) creators those who create value for the fashion wearable, (vii) marketers promote advertising for selling, (viii) producers make the decisions on which fashion items to produce, and how to produce them,(x) suppliers those who produce item materials (xi) workers employed by the suppliers.

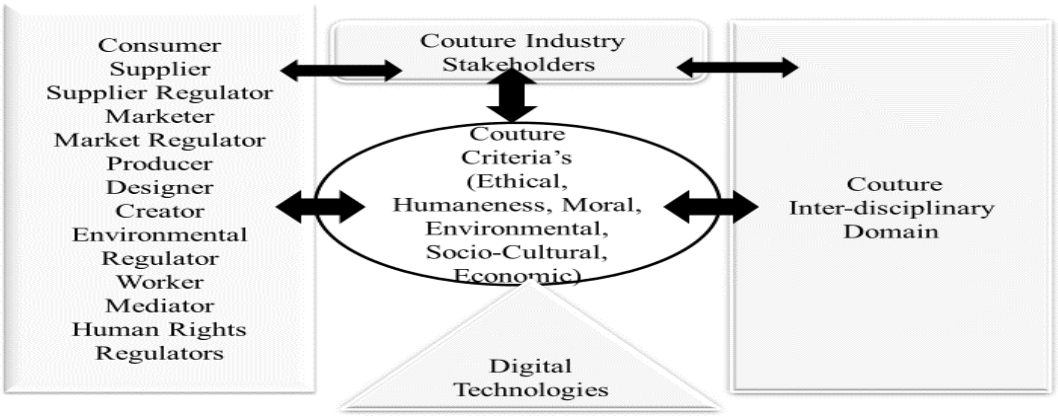

Fig.4 Couture Inter-Disciplinary Domain

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The digital technologies (artificial intelligence, the blockchain, cloud computing, Internet of Things, machine language, natural processing language, and cognitive technologies) for the couture market bring the trends in couture information systems and insights to support fashion business operations, e-commerce platforms, and enterprise resources planning systems to drive and sustain innovation. In particular, the cognitive technologies mimic elements of the human brain designed to interpret, derive meaning from human forms of communication, context, and dialogue management (such as speech, language, visual cues, gesture, color, touch) to provide appropriate inter-discipline informing systems between the global community and couture stakeholders. Cognitive applications are to enhance consumer choice, customer service, support design creation, and implementation, and execute intelligent procurement systems to manage inventory management control. Cognitive system, a type of artificial intelligence system, analyzes vast amounts of data to make connections between various constituents of information like the human brain that process visual images, video, fashion reviews, social media and technology on a mammoth scale enabling to project demand for products. For example, IBM Watson is a cognitive system that can precisely project the colors and patterns to preeminent consumers 'closets.

6.Lean Canvas Model [4] of a venture must have an unrelenting logic. A better lean canvas model ought to beat a better idea or technology. Lean Canvas (Business) model innovation is not just about technology. The following elements of a lean canvas model is imperative for a couture venture success:

(i) Target – Ventures, and existing business to adopt venture lean structure.
(ii) Focus – Entrepreneurs, Founders & top leadership team of ventures
(iii) Customers - Not much emphasis on customer segments because ventures have no known or tested products to sell
(iv) Approach - It begins with identifying problems and solutions, the distribution channels to attain the solutions, cost structure and projected revenue streams.
(v) Application – Simple problem – solution orientation that enables the entrepreneurs to develop step by step from inception to sustainable phase.
(vi) Competition – Assessment of unfair advantage over other players and to capitalize on it for better grounding.

In practice, LCM ought to consist of the following building blocks, as shown in figure 5, from the inception stage to the sustainability phase:

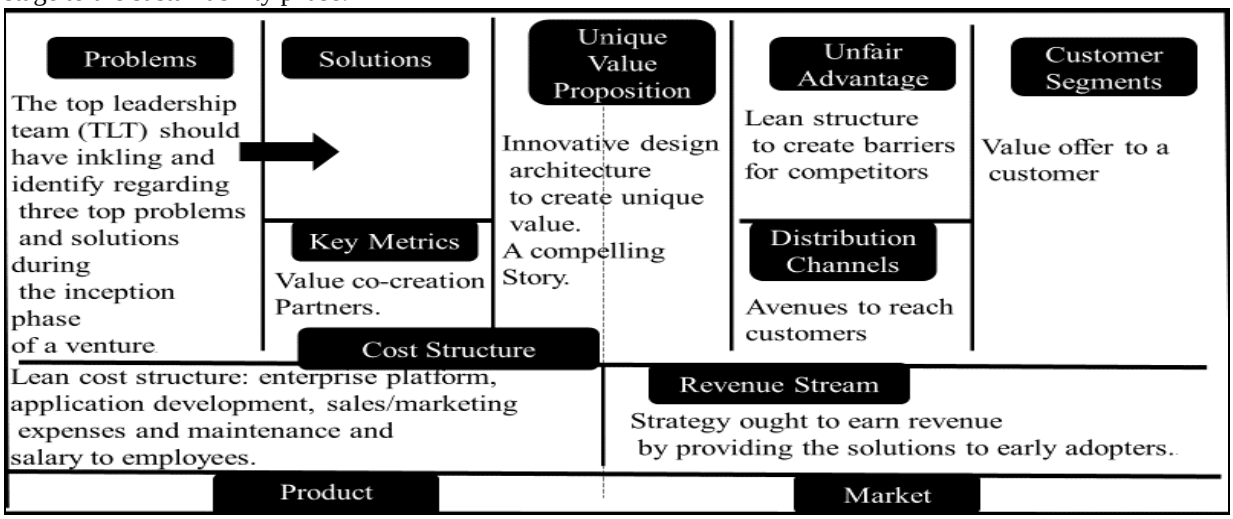

Fig.5 Lean Canvas Model (LCM)

(i)**Problems & Solutions** - founder (s) cannot grow an enterprise singlehandedly. A dream team begins with motivated leaders who are willing to set egos aside for the good of the team. Working in

harmony with a single purpose the members can achieve greatness in their objective. The leadership team must understand innovation that includes business model creativity. The top leadership team (TLT) should have inkling and identify regarding three top problems and solutions during the inception phase of a venture. TLT need to have brainstorming sessions and the company's strategy to think in the present, even though the cogent vision should become world's No.1 couture provider and execute lean structure with a "getting things done" attitude

(ii)**Customer Segments** – A company wants to offer value to a customer. Couture brands must focus on customer-centric approach and on early adopters of the product and/or service to find out the specific issues on the early adopters and narrowed down the distinguishing characteristics of the prototypical customer. First, the market aspects focus on the target customers (early adopters) and the channels to reach them. From its inception, the target should be to focus on markets that attract the early adopters and to partner in those regions to capitalize a good opportunity to grab market share. Simply,

(iii)**Unique Value Proposition** – Overall view of the value proposition of the product and/or service with a compelling story. The couture enterprises ought to craft an innovative design architecture to create unique value. The couture company's design solution platform ought to provide originality and unique thinking. It is that authenticity attracts and retains clients as partners who can believe in unique value proposition (UVP).

(iv)**Unfair Advantage (Creating Barriers)** - one of the interesting aspects of the lean structure is to create barriers so that others cannot copy or imitate the unique value proposition. The couture companies must manage to build technology that becomes a barrier to entry for the competitors.

(v)**Key Metrics (Key Activities & Partners)** – includes enterprise platform and application development, integration, application management, infrastructure operation, and support services. Collaboration with value creation partners is one of the key strategies of lean structure business model. unique differentiation for the competitive barrier,

(vi)**Distribution Channels** - involves various avenues to reach the customer and end user. Alliances with appropriate partners are one of the ideal distribution channels. All the distribution, regulatory and marketing promotional matters should be handled to provide broader solutions and offer a single point of contact to end users. The big challenge is to ensure that the company has a sales/service/support team that can support the markets.

(vii)**Revenue Mechanism** – Couture company strategy ought to start in earning revenue by providing the solutions to early adopters. Lean pricing depends on the type of revenue model, however, it's quite common for ventures to lower their cost. There is also the idea of value perception,

(viii)**Cost Structure** - Cost structure must be lean to include salary to employees, enterprise platform, application development, sales/marketing expenses and maintenance.

Based on the author´s extensive business modeling experience, a better LCM often beats a unique idea or technology. The founder(s) ought to have an inkling of the problems and solutions from the inception of the venture. Regularly brainstorming sessions are required with the founding team. The company's strategy should be to (a) think in the present, even though the cogent vision to become a formidable player, and ought to execute a lean structure with a "getting things done" attitude, (b) to use a customer-centric approach and must hone in on early adopters, (c) to find out the specific issues on the early adopters and narrowed down the distinguishing characteristics of prototypical customer. The leadership team must understand that innovation must include LCM, hence sketching the lean structure, the problems and solutions to be identified at the inception stage. The idea behind the Lean Startup modeling is to simplify the process of creating a new venture by using the following three key practical principles: (i) Canvas must leaner, (ii) Minimum viable product, and (iii) Agile development.

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METHODOLOGY

In this conceptual study, the research methodology includes literature review, relevant databases analytics and a case study on the company Stella McCartney to provide broad search, identify high-quality peer-reviewed papers and analysis to obtain a perspective on the Couturelogy brands.

Literature review

The literature review includes the following three (3) segments [5]:

Segment 1: Explores various terms broadly and the search keywords include explanation on the following sections mentioned above: (a)introduction, (b)research background that includes linear economy, reuse economy, circular economy, couture (circular, conscience, compassion) overview, couture Inter-disciplinary domain, and lean canvas modeling (LCM).

Segment 2: As shown in figure 6, the literature review also focuses on the following principal constituents that are co-related to each other to drive couture enterprises to be successful : (i) circularity & consumption (ii) compassion, (iii) conscience, (iv) eco-system and efficiency, (v) innovation & digital technology, (vi) product and service exchange, (vii) environmental sustainability, (viii) consumption & circular economy, and (ix) sustainable competitive advantage.

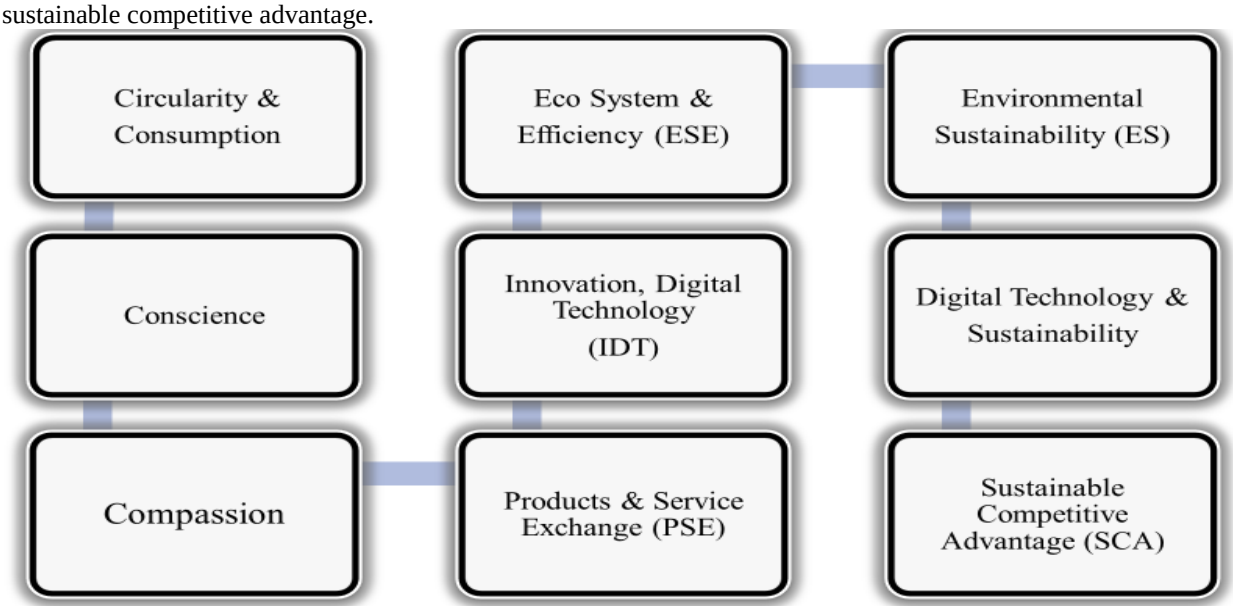

Fig.6 Principal constituents of Couturelogy

(i)**Circularity & Consumption** [6] **-** Changing a linear system demands radical transformation. It means every stakeholder in the couture industry collaborating with unprecedented levels of conviction and innovation. This is a tremendous opportunity to unleash the creative potential of fashion. The future of fashion is circular – it will be restorative and regenerative by design and eliminate *the* waste. The following salient points to consider supporting circular couture as a maker or user:

Maker perspective:

- Design principles such as longevity, resource efficiency, biodegradability, recyclability of products, services and processes can play an important role in transitioning to the circular economy.
- Source and produce with efficiency, renewables, good ethics, support long life, reuse, recycle or compost all remains, collaborate widely, and without toxicity.

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User perspective:

- Use, wash and repair with care
- Consider rent, loan, swap, secondhand or redesign instead of buying new
- Purchase quality as opposed to quantity

Circular models have been around for centuries, but recent advances of technologies have enabled and accelerated the transformation from linear to circular fashion consumption models. Consumers are more conscious than ever. This trend is causing a paradigm shift to a new consumption models such as clothes-as-a-service, where potentially the customer only pays for the actual amount of usage and allowing other users to share the garment when it would otherwise have been kept in a clothing drawer in a linear model. This new model includes using sharing platforms that allow customers to rent apparels and expands the usage rate of a garment's useful life. Hence, the new model offers temporary access rather than ownership and prevents waste.

(ii)**Conscience** [7] **-** The planned obsolescence term is used when something is designed to ultimately be replaced by a new product or service. The disposable culture is a perpetual cycle where everything is meant to be used up, thrown away and then purchased again. This is where the conscious couture comes in. The building blocks of consciousness are as follows: (i) awareness, (ii) intelligence, (iii) creativity, (iv) idea of self, and (v) introspection. Conscious couture is a movement that aims to reduce waste, environmental degradation, and the eco-conscious mindset throughout the value chain. By slowing down production and consumption, the couture industry can attain sustainability for the future.

(iii)**Compassion** [8] - As the circular couture concept continues to proliferate, an additional concept is now emerging called the concept of 'compassionate couture" - a fundamental shift from simply being aware to the feeling of benevolence towards all stakeholders of the industry. This new evolution from consciousness to compassion means that couture brands will start to lead 'from their heart' to do good for the society as opposed to simply 'from their minds'. The elements of compassion include: (i) recognizing suffering, (ii) understanding the universality of human suffering, (iii) feeling for the person suffering, (iv) tolerating uncomfortable feelings, and (v) motivation to act to alleviate suffering.

(iv)**Ecosystem & efficiency** - For the couture market ecosystems, human emotion factors become an integral part of the creation and design approach in cognitive haute couture and a pivotal determinant for the communication of the couture brand with the stakeholders. Encircling 3C couture ecosystems design thinkingwith design tools are a path to generate systems co-creation. The introduction of ecosystems originates from the social sphere in the analysis of the system 's organization dynamics and to introduce a system view on value co-creation. The ecosystem can be explored from a macro standpoint to generate value co-creation and new knowledge. that continuously implement enhanced points of view and on broader ecologies. The ecosystem is created by a collaboration between couture ecosystem brand owners and other stakeholders' digital technologies producing new social rules to enhance value co-creation and innovation. Eco-efficiency services are defined as a product – service mix at the World Business Council for Sustainable Development as a higher added value and a lesser environmental impact.

(v)**Innovation & digital Technology** - Technology is viewed as one of the major dimensions of ecosystems. Concerning technology, analysis of data collected from various databases mentioned in the methodology section confirms that cognitive system is crucial elements for optimizing couture company's management and facilitating the creation and maintenance of sustainable relationships between the stakeholders. Resources sharing highlight the potential role of technology for leveraging knowledge exchange to communicate with stakeholders and promote continual innovation systematically.

(vi)**Products & services exchange** - The value should be considered from a socio-economic context point of view. As per service dominant logic (SDL) literature, all providers are service providers, and service is the fundamental basis of exchange. Based on the author´s extensive practitioner experience in value co-creation,

this research is the basis for product and service exchange, a logic dominant in product and service system. Value is co-created with the stakeholders and measured based on value-in-context. Both communication and transparency are important building blocks to have a meaningful product and service exchange. The market is viewed as a product and service exchange between the stakeholders and the couture brand.

(vii)**Environmental sustainability** - Many couture firms find that the need for trust is key to co-creation of value with the stakeholders and feel the need to involve sustainability campaigners, in their business priorities. Trust not only cuts the costs and but also delays in couture design, development, and other processes. Since environmental, and other factors increasingly shape markets, the growth of trust between ECC brands and their stakeholders help hone sustainable competitive edge and innovation. Environmental sustainability can be achieved in several ways: (i) integrating products and services with couture brands environmental strategy. (ii) linking products and services of couture brands with the social, cultural, and organizational change. Sustainability partnerships can be started and led by the stakeholders of the companies, and NGOs, or other stakeholders. A single couture firm may contribute on the eco-efficiency front, but environmental sustainability will depend on the entire couture industry.

(viii)**Digital technologies & sustainability** - The digital technologies such as cognitive technologies, information communication technology (ICT), artificial intelligence (AI), Internet of Things (IoT), Blockchain, augmented reality (AR) and social media technology, an integration of digital services with the physical products is emerging. The application of digital technologies can bring environmental benefits and sustainability by: (i) Converting, simplifying mechanical elements and replacing them by software, (ii) Enhancing design via software through remote control, (iii) Developing remote services regardless of the geographic dispersion of customers, (iv) Reducing transport of physical goods, (v) Information communication technologies along with the development of 3/4D printing to offer couture companies‘ new opportunities to customers, (vi) Optimization service tasks. (vii) Synchronizing the supply chain of product and services, (viii) Establishing a shared network and database so that products can be easily searched, matched, shared, exchanged, rented, refurbished, remanufactured and recycled.

(ix)**Sustainable competitive advantage** - Customer care and trendsetting are at the core of the sustainable competitive advantage. Maintaining the quality is also one of the fundamental differentiations to attain sustainable competitive advantage (SCA) in the haute couture creation and design. No couture brand alone can fully satisfy stakeholder needs. Sustainable value is a way of managing and calibrating sustainability performance. So, in line with the CLCM framework proposed, ecosystems can be the creation of technology promoted experiences for improving competitiveness to acquire a sustainable competitive advantage.

Segment 3: As shown in Table 1, sustainable production and consumption are essential to attain to minimize material usage and can be managed to reduce waste. The transition to a new consumer model requires a circular economy approach that is enabled by the following smart technologies and the entire value chain need to be transformed based on circularity principles:

(i) an advanced collection system, sorting approach and recycling technologies – apps, sensors, robots.
(ii) efficient materials processing technologies – process automation, artificial intelligence
(iii) production technologies that support design for circularity – 4D/3D printing, modularity, repairability.
(iv) interactive platforms for enhanced connectivity – apps, websites, databases, Internet of Things (IoT).
(v) Digital technology can generate sustainability, and the digital world will become a circular world

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Table 1. Digital World Becomes A Circular World

Technologies	Sustainable impact
Digital Technologies Blockchain (BC) Information Communication Technology (ICT) Artificial Intelligence Machine Language (ML) Natural Processing Language (NPL) RFID Cloud Computing (CC) Internet of Things & Internet of Soft Things **(**IoST) Cognitive Technology (CT)	Blockchain, ICT, and IoT create opportunities for an end-to-end connected and transparent fashion supply chain. With distributed database protocols, blockchain enables a complete audit trail throughout the entire fashion value chain. IoT enables connected clothes across the very same value chain. Until now, manual intervention is required to recycle apparel. As artificial intelligence (AI) adds intelligence to products and adapts through progressive learning it will become the most important technological phenomena of the future—second, only to the Blockchain. Machine learning (ML), the promising subset of AI, aims to teach computers to learn from examples (or "Data") and perform a task without being explicitly programmed to do so. Some AI, such as Microsoft, Apple, Google's face recognition software, can make decisions like recognizing a face. From 3D avatars to wardrobe advisers, AI is shaping the way one gets dressed. The author contends that there will be an algorithm for fashion style and develop the meta-cognition that associate with consciousness. Artificial intelligence (AI), cognitive computing, and other technologies affecting day to day life, so too will opportunities to improve efficiency, performance, and productivity. The use of machine learning (ML) and natural language processing (NLP) techniques drive the automation of a complex web of cognitive processes benefit various aspects of internationalization process of a fashion brand to penetrate international markets to achieve the global vision. In a connected supply chain, there is information available across the entire value chain. RFID tag inventory provides opportunities for instant traceability, improved inventory management, and automated recycling. A connected supply chain creates digital information, where analytics can be used to establish circular insights. Automated sorting of clothing enables more efficient recycling and reduces waste. Improved logistics, inventory management, and planning of collections contributing to less waste, and greenhouse gas emissions. Also enables transparency and instant tracking of material sources. Through cloud computing, fashion companies are turning to machine learning, the Internet of Things (IoT), business analytics and blockchain technology to help customers identify and solve challenges and improve customer service. 3D design is moving into the cloud enabling to work directly in the browser over a connection to the web. Fashion designers can drive innovation and lower costs through cloud computing. Internet of Soft Things (IoST) brings together person-centered psychotherapists with garment designers and scientists to ask how networks of apparel can benefit to support improved perceptions of mental wellbeing. The cognitive technology (CT) for the couture market brings the couture trends in couture information systems and insights to support fashion business operations, e-commerce platforms, various cognitive technologies and enterprise resources planning systems to drive and sustain innovation. Also, CT operates, mimic elements of the human brain designed to interpret, derive meaning from human forms of communication, context, and dialogue management (such as speech, language, visual cues, gesture, color, touch) to provide appropriate inter-discipline informing systems between the global community and couture industry stakeholders. The CT applications are to enhance consumer choice, customer service, support design creation, and implementation, and execute intelligent procurement systems to manage inventory management control.
Bio-Technologies	Biotechnology concepts are characterized by using technologies with biology. This

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Bio-Materials Bio- Energy Biomimicry	includes creating products and processes from living organisms and derivatives thereof. Example - trousers made from citrus waste, residues from winemaking or even cow manure. Biological innovation is limitless. Biomimicry is all about organism's "magic" for sustainable innovation. The entire couture industry could be benefited through such innovation and knowledge because all processes in nature are low energy, material efficient and occur at ambient temperature. Couture companies through biomimicry save tremendous amounts of capital by mimicking nature's processes, forms or ecosystems. Since nature has no waste or inventory; it doesn't need the energy to work, it does not pollute or intoxicate; therefore 100% sustainable. Biomimicry creates sustainable innovation in design, business, and many other disciplines; by applying the elements of nature. Circular Economy and Biomimicry – the two concepts are synergetic and perfect emulation in a design that solves the problem in a sustainable way by designing the life span in a circular way. Innovations in circular biomass use include biorefinery, 4D/3D printing with bioplastics, better use of residues, and biowaste treatment. Consumers can contribute to bio- sustainability by eating less animal-based protein, preventing food waste and separating biowaste from other waste streams. The bio-sustainability includes the production of renewable biological resources and their conversion bio-based products and bioenergy. "Bio-Couturelogy" is coined by the author and derived from bio-materials, bio-energy, and biomimicry. The bio-materials is applied to couture industry and the purpose is to reduce waste as well as conserve non-renewable resources. To protect the planet, it is high time to start using byproducts, previously discarded as waste, to produce sustainable materials.
Physical Technologies Graphene Materials Nano Materials Pico Materials 3D/4D Solutions Smart Dust Machine Vision Sartorial Robotics	Graphene (2D) materials are emerging in a wide range of applications including new generations of wearables and batteries. Fabrics made from Nano/Pico fibers, with Nano/Pico particles and Nano/Pico filaments an integral part of the weave. A new era of " smart" fabrics could automatically respond to one's body and the environment around someone. The seamless integration in the Nano/ Pico technology is possible for ultra-thin electronics functions in textiles that combines fashion and electronics. 3D/4D printing is applied for piracy protection for the fashion industry. The following range of opportunities 3D/4D printing technology brings to the fashion world: (i) shape and function of sneakers can change according to consumer need and usage (running, walking, jumping, etc.)., (ii) Wearables (Apparels, Jewelry, and Watches) that can adapt to the form of the body, change color and properties depending on the environment (weather, danger, etc.), (iii) jewelry parts that are 3D/4D printed, self-assembled, and automatically adapt to the form of the body , and (iv)apparels are printed in one piece despite being much larger than the space inside the printer and conform flexibly to the body. Smart dust refers to little things called "motes" offers insight into new directions in technology and can monitor bar code, surface treatments of fabrics and other applications of smart wearables. Nowadays a machine vision system can track how fashions spread through society facilitating the first hard evidence and can classify fashion trends that happen from one season to the next. Machine vision techniques show the trends in fashion shows influence

	street-chic outfits that appear afterward. Sartorial Robotics is a design and development method of merging robotics and fashion wearables to facilitate interaction and mimic the fashion, aesthetics, materials, and construction techniques of wearables. This enhances the social aspects of robot-human interaction assisting how to situate robotics in one's lives and cultures.

Databases Analytics

(i)**Global Database for Circular Economy** - The Circular Economy Club is the non-profit international network of circular economy professionals and organizations in over sixty countries. The organization is headquartered in London, coordinated by volunteers, open and free for anyone. A new global open source database based on sixty countries information has been established to support the growth of the circular economy is designed to accelerate the impact of circularity. https://www.innovatorsmag.com/circular-economy-database-launched/, https://www.circulareconomyclub.com/gd-home/cec-global-database/

(ii)**Eurostat** - In 2015, the European Commission adopted a circular economy package. As part of the EU Action Plan, the European Commission adopted a new set of measures effective 2018. Eurostat's role is to provide easy access to the relevant data for citizens and policymakers to support the monitoring progress and a clear signal to economic stakeholders such as business and consumers on ongoing trends. The following main topics for which data is available in the database: (i) production & consumption, (ii) waste management, (iii) secondary raw materials, (iv) innovation & competitiveness. https://ec.europa.eu/eurostat/web/circular-economy/overview

(iii)**Hosho** - is a textiles firm in India and is focused on providing innovative home textiles both to the Indian and export markets and provides a sustainable fashion database. http://www.hosho.in/blog/2016/12/23/blog20161223sustainable-fashion-database-eco-friendly-natural-fashion-materials-practices-trends/

(iv)**My Source™** - World 's most comprehensive database of ethical couture businesses and resources and is a platform of tools and services for ethical couture market aims to inspire fashion professionals and businesses to attain sustainability. This ethical couture database is a one-stop-shop of invaluable and up to date information with a focus on sustainability and beyond. In this study, the author has used My Source™ for ethical criteria review requirement for the Couturelogy brands. (https://ethicalfashionforum.com).

(v)**HASTAC** - Founded in 2002 world's first, HASTAC is an interdisciplinary community of more than sixteen thousand members globally with over four hundred organizations. https://www.hastac.org/about-hastac.

(vi)**IBM® Db2™** - Database software optimized to offer solutions to deliver results rapidly by running queries and real-time analytics to generate actionable insights and performance while lowering costs, flexibility, scalability, reliability for couture brands or any other enterprises in the cognitive, and digital era. Cognitive technologies ensure the customer with a right product of choice, like in the case of Stella McCartney brand, without spending hours searching portals and can offer trans-formative value to online couture retailers especially focusing on Couturelogy (https://www.ibm.com/analytics/en/db2).

(vii)**EBSCO Discovery Services** - EDS™ is an online reference system accessible via the Internet and provides a variety of proprietary full-text databases and popular databases from leading information providers with • Fast, simple access to all the library's collection (electronic and print) • Journals - high quality peer-reviewed research papers for various industries including Couturelogy • Magazines including fashion industry • Books • Databases • Institutional Repositories • Highest-quality metadata of any discovery service. For this study, the author has used EDS™- the only full-featured research experience intuitive search for the extensive literature review on high-quality peer-reviewed research papers (https://www.ebsco.com/EDS).

(viii)**Google Scholar** - Google Scholar facilitated the author an effortless way to broadly search for scholarly peer-reviewed research papers relevant to this study. From one place, the author could search for articles, thesis, books, abstracts, opinions, academic publishers, professional societies, online repositories, and websites in many disciplines and sources (https://scholar.google.com).

A Case (Stella McCartney) Study & Perspectives [9]
In social science, cases study involves an in-depth investigation of a case related to circumstantial conditions. The case study research has an outstanding position in many disciplines and industries ranging from fashion, technology, cognitive diversity, psychology, anthropology, sociology, and administrative science.

Stella McCartney is an English fashion designer and a lifelong vegetarian entered the fashion industry at the age of 16 interning at Christian Lacroix. She is a firm supporter of animal rights and is particularly known for her use of vegetarian and animal-free alternatives in her couture design. In 2001, McCartney launched her first eponymous collection in Paris as a 50/50 joint venture partnership with Kering. In 2004, McCartney launched a joint-venture line with Adidas in sports performance collection for women. In 2010, a collaboration in creating jewelry collections with Disney was established. Stella McCartney designed the apparel for both the 2012 Olympic and Paralympic and continued to design for the 2016 summer Olympics. A new fashion industry charter for climate action collaboration with United Nations was launched in December 2018 to support sustainable business practices. Today, the brand has 48 freestanding stores in locations around the globe including New York, London, Los Angeles, and Tokyo and are distributed in over 77 countries through 800+ wholesale accounts. Sustainability shapes Stella McCartney policies, its underlying circular **business model**, therefore in this study Stella McCartney being studied from the conscious, compassion and circularity perspective and actions. The company has changed the system by making fashion circular and eliminating the concept of waste and envision tremendous opportunity to unleash the creative potential of couture. The transition to a circular economy requires collaboration across the value chain and the following initiatives and partnerships helping the Stella McCartney brand to turn the circular vision into reality: (i) the Ellen McArthur Foundation, (ii) the RealReal, (iii) cradle to cradle products innovation initiative, and (iv) clevercare. The company source materials (including biomaterials) through the lens of the circular economy promoting restorative farming practices and designing products that are made to last. Table 2 shows the vision, value proposition, value creation and value capture summary of the Stella McCartney circular brand.

Table 2. Summary of the Stella McCartney Brand Overview

Couture Brands /HQR.	Stella McCartney, United Kingdom
Vision	Believes in restorative and regenerative by design &making circular a reality. Waste becomes a source of new material
Value Proposition	Wearables meet ethical and consciousness criteria and are meant to last. Social awareness and sustainability are the hallmark of the brand. Ethos to be honest and responsible. To source sustainable production and encourage trade globally by mixing its creative vision with the richness and positivity.
Value Creation/ Value Capture	Creation of wearables that are not going to get burnt, not going to landfills, not going to damage the environment, and more sustainable. By inspiring consumers not to buy anything with “Stella McCartney face on it” the designer has managed to convince millions of customers to think constructively about sustainability.

It is daunting for most consumers yet to understand the concept of fashion and sustainability incorporating both words together. With the fast fashion industry expanded at an exponential rate, contributing to the world’s total waste by producing much more than we can even consume. However, this idea can be completely reversed. Stella McCartney (SM) is passionate about environmental consciousness and focuses on improving process efficiency to reduce waste and emission and protect the environment. SM is the first brand to contribute to such sustainable initiatives and is not stopping anytime soon. By inspiring consumers not to buy anything with “Stella McCartney's face on it”, the designer has managed to get millions of customers, to think constructively about

the measure of sustainability. As one of the industry's most vocal champions of environmental issues, the brand is a good example of an ethically minded and sustainable business underlying business model and its brand message. Stella McCartney retail stores, studios, offices and 45% of manufacturing operations are powered by wind energy and/or renewable energy and strongly believes in the recycling process. Stella McCartney Sustainable Leopard Printed Eco Sunglasses and are part of a sustainable eyewear collection made from more than 50% natural and renewable resources. The collection uses raw materials taken from natural origins such as castor-oil seeds and all glasses are biodegradable as they are made from bioplastic.
Stella McCartney brand is synonymous with eco-fashion and considering materials through the lens of the circular economy they are broken into two categories – technical and biological materials. Technical materials are materials coming from non-renewable resources. They are inorganic or synthetic materials manufactured by humans – such as nylon, polyester, plastics, and metals – when optimally recycled they can be used many times over without any loss in quality, staying in a continuous cycle. Biological materials are materials that come from renewable sources. They are natural materials that when manufactured for the circular economy can safely decompose into the natural environment (soil, water, etc.) without affecting it in a negative way, providing food for bacteria and microbiological life. Stella McCartney uses the following materials to achieve the sustainability goal: Cashmere, Fibers from the forest, Fur-free-fur, Organic cotton, Recycled Nylon, Silk, Vegetarian leather, and wool. (https://www.stellamccartney.com/experience/us/sustainability/circularity-2/)

TOWARDS A CIRCULAR LEAN CANVAS MODEL

The circular economy is associated with a product life cycle. Production phase, in a lifecycle of a product, describes the product manufacturing process. In this phase, the process is focused on reducing the use of energy and raw material and the waste is minimized. Therefore, to design a lean canvas model the circular economy principle of reduction and reuse is considered in the lean canvas design process. The circular economy also deals with principles during the consumption phase of a product and related to how a product is consumed. A circular lean canvas model (CLCM) for consumption of a product uses the principles “access” and “performance”. In this phase of a product life cycle, the CLCM should be assured to offer a circular consumption. The circular economy also considers the principles for the phase of end-of-life - a product to be managed at end-of-life [10].

Attention for the circular economy (CE) is increasing globally. Given the potential contribution of the CE to the larger challenges of our time, such as combating climate change and making the energy transition, is a positive development. CE will only become reality if it can lead to a circular lean canvas model (CLCM) because they are the foundational elements of companies’ evolution from inception phase to sustainability. Hence, the author developed an CLCM model that consists of the following eight (8) building blocks and provides the basis together to form a business model for the circular economy to accelerate sustainability:
1) aggrandizing the efficiency of energy and materials,
2) value creation from the waste,
3) reinstating with renewables and natural processes,
4) delivering functionality
5) embracing a guardianship role,
6) encouraging adequacy,
7) redirecting the business for society, and
8) mapping scaleup solutions.

The central idea is to close a cycle with relevant stakeholders. A model that leads to a new value proposition or that shows how to alter a currently existing proposition exploring new pathways and unchartered territory. The overarching intention is to inspire with an overview of sources, among which includes the literature used, databases thoroughly reviewed, and an overview of all the companies and institutions that have provided the relevant information. Circular CLCM is a solution for enhancing resource management, eliminating waste production, reducing cost and expanding enterprises performance and determines not only the internal activities but also expands the link between all stakeholders. CLCM is a business model that strives for i) employing fewer materials and resources for producing products and/or services; ii) extending the life of current products and/or services through refurbishment and remanufacturing, and iii) closing the loop of products’ life by recycling. In short, CLCM seeks to reduce, retain, and recycle.

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Consonant society and sustainable development are of expected outcomes of circular lean canvas model (CLCM). To develop a sustainable CLCM requires the interests of relevant stakeholders. Sustainability creates sustained competitive advantage to an organization. Creation of customer value as the epi-center can lead to the sustainable development of a company and society simultaneously.

As shown in figure 7, a CLCM is a sustainable business model which involves sharing knowledge, and value creation from multiple sources. Value co-creation business strategy focused on inscribing social issues by recognizing competitive advantage sources that bring about community benefit. It's also about diverting business exertions in a way that makes the enterprise profit and empowers communities.

Couture brands and their stakeholders continually should adopt a collaborative approach to business thinking and facilitates the resources enabling stakeholders to take part. Rather than simply considering customers as end consumers, fashion brands should actively engage in empowering users to be creative collaborators in the entire value chain process. Value is created by prospective stakeholders, who share their knowledge, throughout the entire value chain process. This spirit of collaboration is encouraged by companies' increased willingness to relinquish some control of their resources to stakeholders. Many factors; such as the convergence of technologies, swiftly changing markets, ubiquitous connectivity, and demanding stakeholders; has been the driver to transpose the global couture market. The totality of this collaborative creative consumer energy is higher than what the organization can achieve alone. With co-creation, a company competently instills their contribution into stakeholder ‘s life and harnesses dexterity and inventiveness. Thus, the market becomes a podium for partnership in a culture of inter-exchange between companies and stakeholders attaining a pathway with the dynamic world of knowledge for creative collaboration to obtain sustainable value co-creation.

In summary, despite the challenges and the barriers, CLCM seeks to reduce, retain, and recycle. Couture brands can transit from the linear model to CLCM through the following drivers:

- An anticipated performance with reduction of waste by adopting CLCM
- Innovative opportunities to access new markets
- External pressure could motivate adoption of CLCM

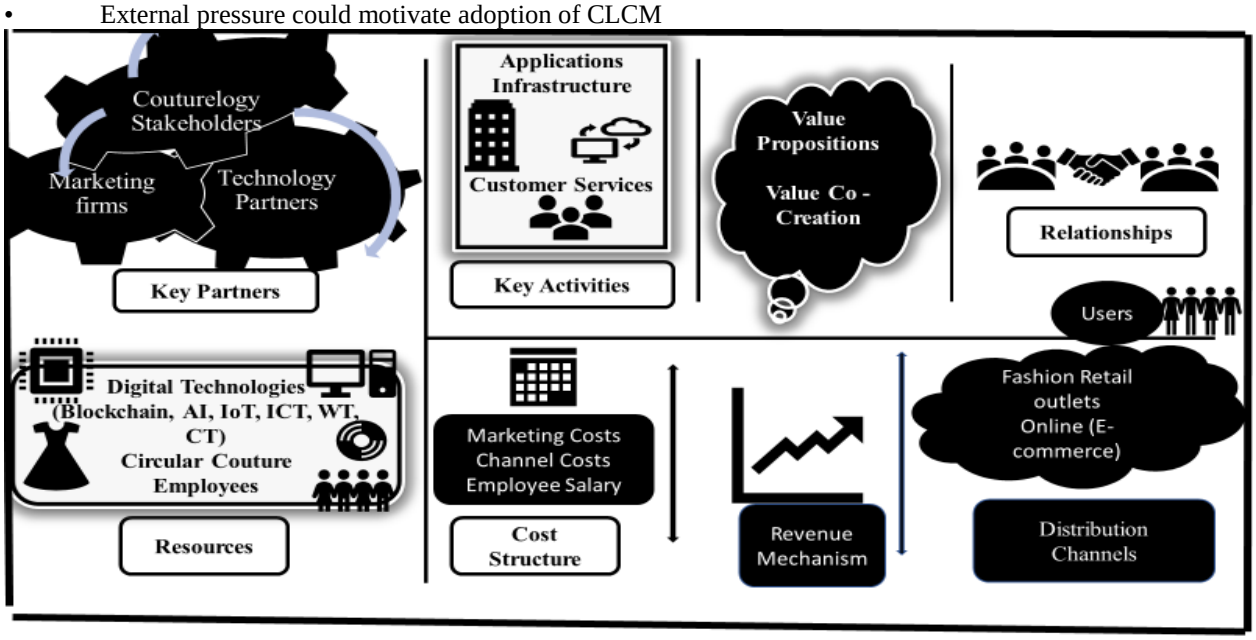

Fig.7 Circular Lean Canvas Model Based on the Circular Economy Principles

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CONTRIBUTIONS/FINDINGS

The contribution of this study provides valuable insights, for the first-time, bestowing new knowledge to the literature on the CLCM framework and practices adopted by the stakeholders for the Couturelogy market. The proposed comprehensive CLCM model provides 8 building blocks mentioned above as a guideline for the entrepreneurs to attain economic benefits and the circularity needs of the society. Also, it can serve as an education model and practice guide for academia, industry practitioners, policymakers, and non-profit organizations. It is recommended to the startup founder (s) and the existing businesses to utilize the proposed model to attain sustainable development and its linkages with community building.

Finding reveals: (i) couture designers ought to use the circular lean canvas model based on the access principle, and (ii) the transition to a circular economy approach is enabled by the state-of-the-art technologies and the transformation of the entire value chain to be based on circularity principles.

CONCLUSION

The world is plagued by economic, social and environmental problems. Organizations can no longer look to their internal capabilities to solve the immense eco-logical problems; therefore, new collaborative business models are imperative. The circular economy is all about recyclogy. One should support circular couture by buying secondhand and selling unwanted clothes. Consumer demand is increasing for sustainable, and ethically-sourced wearable. A variety of couture brands are making efforts to promote sustainability with eco-conscious and benevolence practices. Couture creators and designers are pioneering new eco-friendly fabrics thanks to innovations in digital technology. Designers growing their own fiber spun their own thread, wove their own fabric, and sewed that into apparel. The couture brands are jumping on the sustainable bandwagon bringing the world to the doorstep in an ethical way. The key is to unceasingly innovate the sustainable model for the future. Technology is a broad concept. Digital technologies are based on the digital ecosystem and it can be used as a socio-technical conceptualization to achieve a sustainable distributed system by using computer networking. One of the most common digital technology is the internet of things (IoTs) that connects billions of devices to the Internet. This kind of connectivity allows smart objects to have their own identity and communicate valuable information. Currently, nearly a third of all applications use data analytics and close to a fifth will use big data. Couturelogy, the integration of couture and digital technologies, as a driver of sustainability has never been stronger. To protect the planet and improve living conditions for next generations requires radical transformation to transit from linear to circular model. Emerging digital technologies allow organizations to create value in a circular economy and drives new communication channels, and ultimately enables better use of resources and economic growth. However, technologies are not a universal panacea for sustainability. Their impact needs to be assessed on a comprehensive basis to ensure net positive gains of value co-creation. Hence, technology innovation is paramount as a central pillar for the development of circular lean canvas models (CLCM).

Simultaneous development of all aspects of sustainability is not possible and it makes daunting in designing and prioritizing sustainable goals. Sustainable production needs to do more with less and profits need to be anchored to social benefits for people and the planet based on sharing values and reducing cost.

The following trends are envisioned over the coming years: (i) fashion consumers are going to be much more aware of the mass-produced, hence likely to see a rise in the demand of high-quality ethical couture that impacts positively to the circular economy, (ii) ‘Couture on-demand’, consumers are likely to develop emotional attachment to their wearables and hold on to them for longer reducing the need for storage and the risk of over-production, thus minimizing waste and the use of natural resources across the supply chain, (iii) The concept “circular, conscience, compassion couture” will continue to grow in popularity that combines the key principles of “sustainable couture” and “circular economy”, (iv) the concept of “compassionate couture” (from consciousness to genuine compassion) is evolving as a fundamental shift from simply being mindful to feeling “from their hearts” as opposed to “from their minds”- compassion towards humanity, animals, and ecosystems across the value chain. Future researches can build on this research model proposed in this study to examine the limitations of this model by using empirical researches.

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REFERENCES

[1] Souza Penaforte, L & Cappellieri, A (2018). E-couture. Renewable Energy: An alternative Perspective for handcraft accessories, Politesi – Digital Archive of PhD and Post Graduate Thesis https://hdl.handle.net/10589/142354
[2] Padhi P.K. (2018, p.135). Towards a Sustainable Value Co-Creation Framework: Ethical Cognitive Couture, Cognitive System, and Sustainability, International Journal of Engineering and Management Research, doi.org/10.31033/ijemr.8.4.17
[3] Merli, R; Preziosi, M; & Alessia, A (2018). How do scholars approach the circular economy? A systematic literature review, Journal of Cleaner Production, Vol.178, p.703-722 https://doi.org/10.1016/j.jclepro.2017.12.112
[4] Frederick, H; O'Connor; & Kuratko, D.F (2018). Entrepreneurship (Lean Canvas Model), books.google.com
[5] Padhi P.K. (2018, p.140-144). Towards a Sustainable Value Co-Creation Framework: Ethical Cognitive Couture, Cognitive System, and Sustainability, International Journal of Engineering and Management Research, doi.org/10.31033/ijemr.8.4.17
[6] Eden, S (2015). Blurring the boundaries: Prosumption, circularity and online sustainable consumption through Freecycle, Journal of Consumer Culture, https://doi.org/10.1177/1469540515586871
[7] Sproles, G.B (1981). Analyzing Fashion Life Cycles: Principles and Perspectives, Journal of Marketing, Vol.45, No.4, p.116-124, DOI: 10.2307/1251479, https://www.jstor.org/stable/1251479
[8] Davis, M.H, Empathy A Social Psychological Approach, Book by Taylor Francis file:///C:/Users/ggllc/AppData/Local/Temp/9780429493898_googlepreview.pdf
[9] Donato, C; Amatulli, C; & De Angelis, M (2018). Responsible Luxury Development: A Study on Luxury Companies' CSR, Circular Economy, and Entrepreneurship, Sustainable Luxury, p. 21-38. https://doi.org/10.1007/978-981-13-0623-5_2
[10] Nosratabadi, S., Atobishi, T., and Motaghi, H. (2018). A Circular Business Model for Cloud Computing Services Providers. International Journal of Community Development & Management Studies, 2, 105-120, Retrieved from: http://ijcdms.org/Volume02/v2p105-120Motaghi4669.pdf

BIOGRAPHY

Prafulla Kumar Padhi, a serial entrepreneur, has over 42 years of global business experience and held the Founder, CEO and Chairman of the Board positions for more than 25years and managed up to US$1.2 Billion revenue operations. His education qualification includes a Master of Science degree from the prestigious Massachusetts Institute of Technology (MIT), Cambridge, USA and a graduate of the Ivy League Wharton School of Business, University of Pennsylvania (USA) and holds seven diploma certificates from the Ivy League Columbia University (USA), the Ivy League Dartmouth College (USA), and Kellogg School of Management (USA). For more than 40 years, as a pioneer, Mr. Padhi has been involved in entrepreneurial venture endeavors in disruptive technologies and smart fashion wearable ventures globally. So far, he has done business in 46 countries and travelled to 142 countries. He is an author, independent researcher, innovator, pioneer, product marketing architect (patent/copyright holder) and teacher in creation, design, marketing disruptive technologies and products.