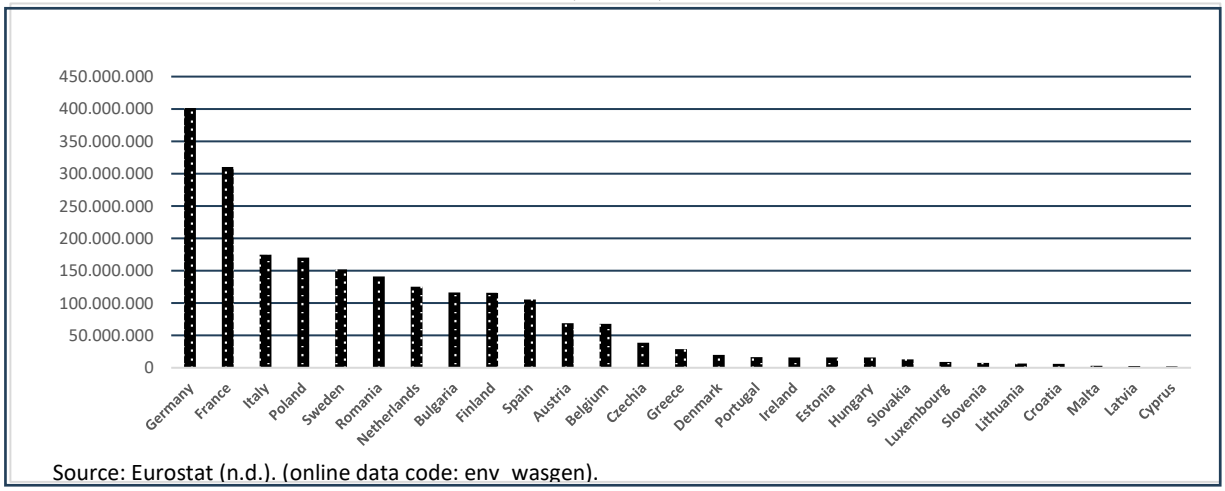
***Annex Figure 1*. EU Waste Generation by Member State, 2020 (in tons)**



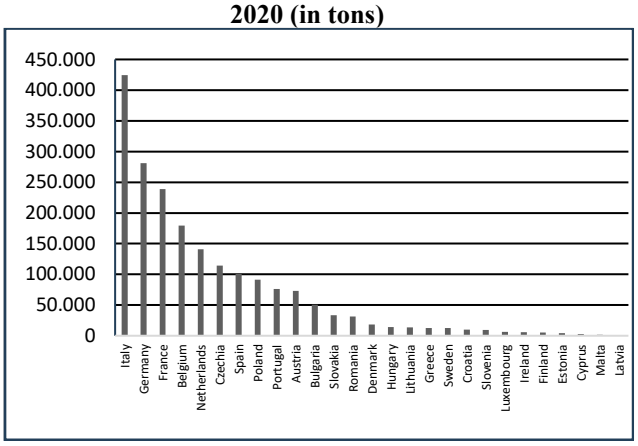
Source: Eurostat (n.d.). (online data code: env_wasgen).

***Annex Figure 2*. Carbon Emissions of Apparel and Footwear Industry**

	%	MILLION METRIC TONS CO_2eq
Apparel	6.7%	3,290
Footwear	1.4%	700
Total apparel & footwear impacts	**8.1%**	**3,990**
Compared to:		
Total global CO_2eq impacts	100%	49,300

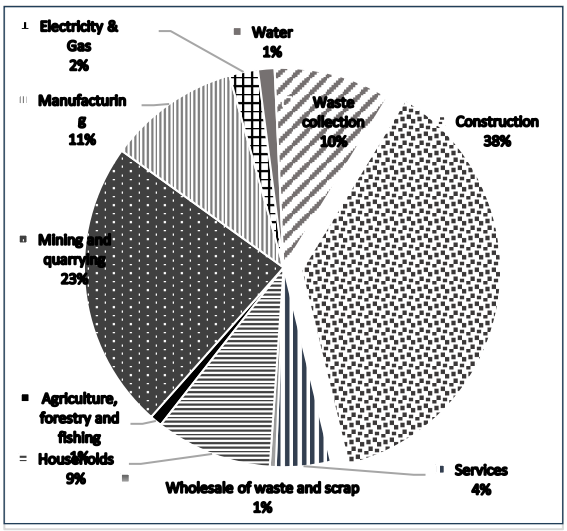
Source: Quantis (2018, p. 18).

***Annex Figure 3*. EU Textile Waste by Member State, 2020 (in tons)**



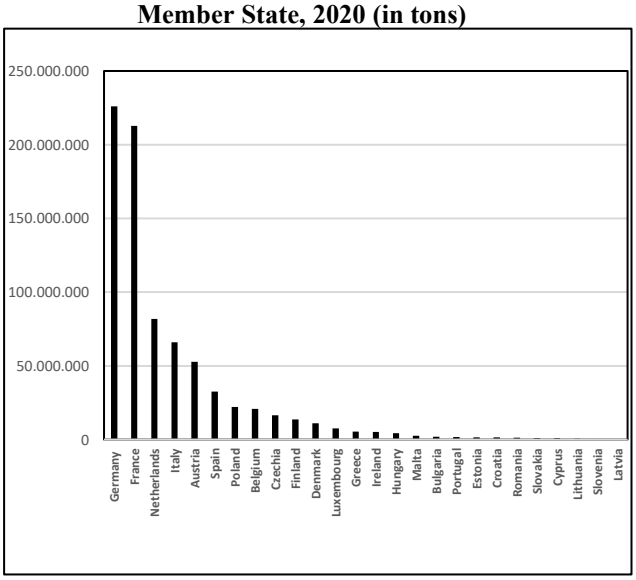
Source: Eurostat (n.d.). (online data code: env_wasgen).

***Annex Figure 4*. Waste Generation by Economic Activity, EU-27**



Source: Eurostat (n.d.). (Online data code: env. Wasgen)

***Annex Figure 5*. EU Construction Waste by Member State, 2020 (in tons)**



Source: Eurostat (n.d.). (Online data code: env_wasgen)

Annex Table 1
Definitions and Interpretations of the Circular Economy

Source	Definition/interpretation
Sauve et al. (2016)	Circular economy refers to the "production and consumption of goods through closed loop material flows that internalize environmental externalities linked to virgin resource extraction and the generation of waste (including pollution)".
EEA (2016)	"A circular economy provides opportunities to create well-being, growth, and jobs, while reducing environmental pressures. The concept can, in principle, be applied to all kinds of natural resources, including biotic and abiotic materials, water and land."
Ghisellini et al. (2016)	The radical reshaping of all processes across the life cycle of products conducted by innovative actors has the potential to not only achieve material or energy recovery but also to improve the entire living and economic model.
Mitchell (2015)	**A** circular economy is an alternative to a traditional linear economy (make-use-dispose) in which we keep resources in use for as long as possible, extracting the maximum value from them whilst in use, then recovering and reusing products and materials.
European Commission (2015)	The circular economy is an economy "where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimized". The transition to a more circular economy would make "an essential contribution to the EU's efforts to develop a sustainable, low-carbon, resource-efficient and competitive economy.
ADEME (2014)	The objective of the circular economy is to reduce the environmental impact of resource consumption and improve social well-being.
EEA (2014)	Circular economy "refers mainly to physical and material resource aspects of the economy — it focuses on recycling, limiting and re-using the physical inputs to the economy, and using waste as a resource leading to reduced primary resource consumption."
Su et al. (2013)	The focus of the circular economy gradually extends beyond issues related to material management and covers other aspects, such as energy efficiency and conservation, land management, soil protection and water.
Bastein et al. (2013)	The circular economy transition "is an essential condition for a resilient industrial system that facilitates new kinds of economic activity, strengthens competitiveness and generates employment".
Preston (2012)	"Circular economy is an approach that would transform the function of resources in the economy. Waste from factories would become a valuable input to another process — and products could be repaired, reused, or upgraded instead of thrown away".
Ellen McArthur Foundation (2013a, 2013b, 2015a)	Circular economy is "an industrial system that is restorative and regenerative by intention and design. It replaces the 'end of life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and within this, business models". The overall objective is to "enable effective flows of materials, energy, labor and information so that natural and social capital can be rebuilt".
Heck (2006)	The utilization of sustainable energy is crucial in a circular economy. The transition to a circular economy would require addressing the challenge of establishing a sustainable energy supply as well as decisive action in several other areas such as agriculture, water, soil, and biodiversity.

Source: Adapted from Rizos et al. (2017, p.6)

Annex Table 2
Description of Environmental Indicators

Indicator	Description
Reduction of GHG emissions	refers to CO_2 emissions from energy consumed in building material production or clothes manufacturing as well as release of volatile organic compounds such as nitrogen oxides and sulphur dioxides in the manufacture and transport of construction materials and volatile organic materials such as formaldehyde, chlorine bleach, dyes in clothes manufacturing
Savings on water use	pertains to reduction in water use in construction and textile manufacturing activity but also developing building products that enable building occupants to recycle or use alternative water sources such as rainwater runoff or in the case of textiles, use of low-water fabrics and waterless dyeing methods
Savings on energy consumption	relates to use of energy saving materials in the design and construction of buildings and in the fashion industry, improving building insulation and sealing performance, and enhancing the efficiency of heating, cooling, ventilation, and lighting systems to reduce energy consumption
Embodied pollution	concerns the extent of energy, carbon and water used in the extraction, production, transport and use of construction and fashion materials, implying higher ecological consequences
Solid waste reduction	entails the extent that unwanted products from demolition, pre-construction, on-site construction, and post construction and for fashion, overproduction of apparel are managed by sorting, reducing, reusing, and recycling of waste materials including sorting before use as landfill
Product life cycle extension	relates to selection of materials with recycled content, high durability and resilience from shocks and high recycling or reuse potential in the design and pre-construction or manufacturing phase; building and apparel performance that minimizes need for maintenance and replacement; and maximizing recovery of materials at end of life considering ease of deconstruction or disassembly as well of the building or clothing apparel.
Use of biotic materials	concerns the use of conventional bio-based materials made from plant and animal materials for construction and fashion industries that are biodegradable and emerging bio-renewable materials that are extracted by industrial processes or produced from materials with biological origins but can be regrown
Reduction of exposure to human toxicity	involves segregation and safe disposal of hazardous and toxic construction and textile waste upon demolition, replacement of existing toxic building materials (such as asbestos-based materials, radioactive materials, lead plumbing), and textile materials that emit volatile organic compounds from dyes, formaldehyde, and impregnating agents (see Pacheco-Torgal et al., 2011 for construction example).
Land use	Relates to land occupied by construction assets as well as embodied land use in non-renewable and renewable raw materials and energy over the building's value chain which affect soil sealing (when agricultural or other non-developed land is built upon), soil compaction (high loads caused by construction that reduces soil absorptive capacity), change of land use (ecological land which is built up causing biodiversity loss, soil degradation, and changes in hydrology including eutrophication and acidification) and in textiles, the use of agricultural land for specific crops such as cotton and other fibers and forest management (see Häkkinen et al., 2013).
Endangered species/ Animal welfare	Relates to efforts to preserve endangered species of flora and fauna through breeding and replanting activities or efforts collaborating with NGOs and similar entities whose mission is to ensure that these endangered species will not go extinct, as well as ensuring animal welfare

Source: Compilation of authors from Singh et al. (2016), Yijun et al. (2011), OECD (2019), Haupt & Hellweg (2019), Pacheco-Torgal et al. (2011), Häkkinen et al. (2013) and the Global Footprint Network (see https://www.footprintnetwork.org/

Annex Table 3
Description of Economic Indicators

Indicator	Description
Employment generation	concerns potential to create new jobs and skills related to any of the circularity stages in construction and fashion industries
Trade effects	relates to trade creating effects by way of imports and exports and potential to raise net exports by reducing imports of extractive and energy-intensive primary materials and export of recycled building and textile materials
Business creation and multiplier effects on the value chain	pertains to new businesses created such as small and medium enterprises revolving around new building and textile materials that result from any of the circularity stages and multiplier rounds of buying and selling on suppliers and users of these materials
Financial self-sufficiency	refers to extent the project is scalable and can be financed sustainably from operating profits
Consumption/production patterns	entails changes in consumer usage and buyer acceptance of building and textile materials that are reused, recycled, restored, repaired, or refurbished (upcycled), as well as production processes and business models that are more sustainable and circular
Savings on maintenance costs	involves reduction of building and fashion maintenance and operational costs due to savings on energy and water use
Higher residual values	concerns extension of product life cycles of building and textile materials that raise residual values of the wearing apparel and building or the materials themselves such as bricks and fabrics
Increase in innovation and new technologies and associated investments	relates to innovation effort and investment potential of new technologies and innovations arising from any of the circularity stages in the built and fashion environment
Fiscal effects	pertains to potential for not adversely affecting the budget position by reducing reliance on government or EU subsidies and potential for revised and progressive taxation systems to finance investment costs of the projects or business models that are self-financing such as subscription, leasing, rental fees, etc.

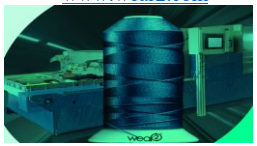
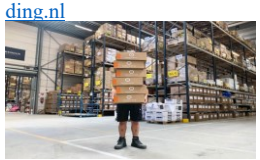
Source: Compilation of authors from Rizos et al. (2017) and Hysa et al. (2020).

Annex Table 4
Description of Social Indicators

Indicator	Description
Stakeholder participation	refers to the extent of consultation, workshops, meeting, and participation of different stakeholder groups affected by circular buildings and wearing apparel
Local community engagement	relates to commitment and actual engagement and ownership of affected local communities in the construction/textile manufacturing and upkeep of the project
Preservation of cultural heritage	involves reconnecting, reminding, preserving cultural values, historical memories and traditions of the project including architectural landmarks and traditional clothing such as national costumes
Development of social capital	concerns promotion of networks in the construction and fashion industries among people who live and work in particular society to enable it to function effectively
Regional inequality	entails extent the project addresses regional disparities in income, wealth, and human development opportunities in relation to building and wearing apparel
Formation of human capital	relates to the extent the project enhances human capital in the construction and fashion industries by way of education, upskilling, literacy, and health (including safety, comfort, and intellectual and social improvement of workers covering job security, pay and benefits, training of employees and consumers by way of consumer health and safety)
Demographic transition and change	refers to the extent the project responds to demographic changes such as declining and ageing population, outmigration, and urbanization
Social cohesion	concerns the promotion of local communities around the building and apparel industries; sense of community spirit and belongingness
Social inclusion	addresses issues about access to rights, and equal opportunities and treatment based on differences in gender, race and ethnicity, religion, and sexual orientation, health, age; and that promotes diversity (e.g., tenements for migrants in the building industry and unisex fashion in wearing apparel, empowerment of women in management positions)
Child and migrant labor including human trafficking	addresses issues related to hiring of child labor in the construction and fashion industries that are mentally, physically, socially, and morally dangerous and harmful to children and that interferes with their schooling as well as issues relating to casual and unskilled workers who move between regions offering their services on a temporary and usually seasonal basis, including coerced or forced labor and sexual exploitation
Involuntary settlement, Indigenous peoples, and local community	refers to physical displacement caused by construction and fashion industries such as relocation or loss of shelter and economic displacement (loss of assets or access to assets that leads to loss of income and livelihood concerns) and issues that affect distinct social and cultural groups that share collective ancestral ties to the land and natural resources where they live, occupy, or from which they have been displaced
Human rights	pertains to issues that promote basic and universal rights and freedoms in the construction and fashion industries that are inalienable and belong to every person in the world from birth until death which are outlined in the Universal Declaration of Human Rights

Source: Compilation of authors from Padilla-Rivera et al. (2020), Persson et al. (2004), Bal et al. (2013).

Annex Table 5
Circular Fashion in the Netherlands

SAMPLE 1			SAMPLE 2	
Design Principle	**Case Company**	**Case Description**	**Case Company**	**Case Description**
Design for Bio-based Materials (DfBM)	**Iron Roots** IRON ROOTS www.iron.roots.com 	Iron Roots is a B2C sustainable sportswear brand that uses natural resources like hemp, eucalyptus, biological cotton and beechwood. Most athletic sportswear are made of nylon and polyester that release microplastics when washed. Fabrics made of eucalyptus and beechwood (also known as TENCEN, lyocell and modal) are antistatic and antibacterial just like hemp.	**Top Vintage** TOPVINTAGE BOUTIQUE https://topvintage.com 	TopVintage started out as one of the first exclusive vintage webshops in the Netherlands. After 15 years, it has become one of Europe's leading niche online boutiques.for carefully curated collection of items from over 200 brands. The company only sells brands that use eco materials like tencel or lyocell, vegan, organic cotton, recycled polyester, animal-friendly wool.
Design for Service/Adaptability (DfSA)	**MUD Jeans** MUD JEANS www.mudjeans.nl 	MudJeans introduced the Lease a Jeans model in 2013 which believes in consumption without ownership. Customers pay €9.95 per month for 12 months after which payments stop automatically and the jeans go to the lessee until the jeans are returned for recycling.	**Something Borrowed** SOMETHING BORROWED somethingborrowednl.com 	Something Borrowed rents designer handbags and clothing to customers for a period of days. By offering a fashion rental platform, the company diverts clothing from the waste stream, extending its lifespan and reducing overall waste. Through its platform, garments are circulated among customers, maximizing their utility, and minimizing waste.
Design for Disassembly/ Reuse/ Manufacture (DfDRM)	**Wear to Go** WEAR2GO CIRCULAR I TEXTILES I SOLUTIONS www.wear2.com 	Wear2Go developed an eco-stitching technology that disassembles textile products at the end of life using an innovative sewing thread Wear2 thread. This sewing thread loses its strength after treatment of 70 seconds using microwave, enabling double-stitched fabrics, zippers, buttons to be reused. Different types of textiles and accessories such as logos, tags, labels, zippers, buttons, visibility tape, and other accessories can be separated from each other without damage within 70 seconds using this method. The resulting textile mono-materials are then quickly and efficiently sorted by type, composition, and color and can be recycled into high-quality, preferably new textiles in their original composition.	**Groenendijk Bedrijfskleding** GROENENDIJK bedrijfskleding | werkt beter www.groenendijkbedrijfskleding.nl 	Groenendijk Bedrijfskleding aims to be a leader in the corporate clothing market in the Benelux. The goal is to offer 100% circular workwear and be the most sustainable company in the industry. Groenendijk is the first company in the world to commercially use the WEAR2 yarn in its own products under the From Scratch brand. This yarn ensures that textiles can be better recycled and separated. Fabric parts can be easily separated by microwave radiation. This yarn breaks when it comes into contact with microwaves The result is that all the used material is separated from each other and can undergo its own recycling process to return to the original raw material. Yarn is made from the raw material and a new garment is made from this.

Design out Waste for Material Recovery (DfWMR)	**Loop.a Life** www.loopalife.com 	Loop.a Life is a Dutch circular and sustainable clothing and lifestyle brand that recycles clothing. The production process starts when discarded clothing in the clothing bin on the streets is collected. The company then buys this *post-consumer* material from local textile sorters and upcycles them into new yarns and end products. It uses the smart Fibersort machine from its partner Textile2Textiles to sort textiles by material and color. With the help of volunteers, the sorted textile is stripped of buttons, zippers, and other haberdashery. The cleaned garments are returned to the original raw material by production partners in Southern Europe by means of mechanical recycling, i.e., without the use of water and chemicals.	**Circularity BV** www.circularity-works.com 	Circularity has developed a unique process to transform used textiles into new garments and other textile items mechanically, without the use of chemicals or water, and without the addition of any virgin fibres whatsoever. Their input consists not just of pre-consumer off-cuts but also of used work wear from industrial customers and institutions, as well as bed linen and towels from the hospitality and healthcare industries that would otherwise end up in incinerators. Through its unique process, the company ensures that all textiles are collected, sorted by color and composition, and responsibly reused into new products, giving them a second life instead of ending up in landfill.
Design for Longevity (DfL)	**Unrecorded** www.unrecorded.co 	Unrecorded creates clothes with sustainability and longevity in mind. The apparel brand is distinctive for its timeless collections, unbound by seasons, and largely gender-neutral range that is built to last and not be thrown away for the next trend. Using organic cotton, colored by non-toxic dyes, Unrecorded commits to producing zero waste. It uses 100% of the fabric they have, meaning zero overstock and zero unused materials. Unrecorded produces in Portugal and Italy. The manufacturers are transparent about their working conditions and the wages the employees receive. Fair production is guaranteed. Unrecorded has several products made from wool. This wool is sustainably certified Merino wool from Australia and 100% mulesing-free. . Unrecorded promotes slow fashion.	**Kings of Indigo** https://kingsofindigo.com 	Kings of Indigo's production focuses on denims. It produces close to home and champions ethical production. Its holistic approach rests on three pillars: Reduce, Reuse, Recycle. Its direct suppliers undergo social audits, meeting quality standards. Information about its production locations is publicly available on Open Supply Hub. It maps its supply chains, tracks sustainability efforts, and provides accessible information to end consumers through QR codes attached to each garment. It focuses on producing closet essentials with timeless designs, that can last for a lifetime, rather than a season. Jeans are treated with laser technology, ozone washing and more sustainable alternatives to stone washing. The company offers a 3-year repair warranty to ensure its customers enjoy durability of their denims.

Annex Table 6
Circular Construction in the Netherlands

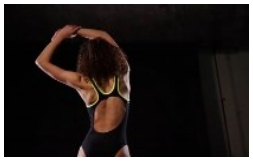
SAMPLE 1			SAMPLE 2	
Design Principle	**Case Company**	**Case Description**	**Case Company**	**Case Description**
Design for Bio-based Materials (DfBM)	**The Growing Pavilion** by BIOBASED CREATIONS www.growingpavilion.com 	The Growing Pavilion is an iconic ode to biobased materials. The award- winning pavilion is unique in the large number of biobased materials used together to create a building and showcases the possibilities and the new aesthetic of biobased materials. The 10-ton CO_2 negative and 95% circular structure is made up of five grown core raw materials: wood, mycelium, residual flows from the agricultural sector, bulrush (cattail) and cotton. Showcasing each material as raw as possible, the pavilion has a very distinctive visual identity, organic texture, and color. It stands as a necessary and viable solution for reducing the use of fossil resources and its destructive impact on climate change..	**Freebooter Biophilic Apartment Amsterdam by GG-Loop** GG loop https://freebooter.nl 	Dutch architecture firm GG Loop has wrapped an apartment building in Amsterdam with a beautiful facade of timber slats. According to the architects, the design for the Freebooter Apartments incorporates several biophilic design principles. Biophilic design is the notion that built and living environment should not only be 'green' in terms of materials, construction, and energy efficiency but should be made of healthy and productive spaces to help reconnect to nature and in which wellbeing is fostered In addition to its light-filtering timber screen, the building also includes a few materials that pay homage to the city's maritime traditions. The project is made of a hybrid structure of Cross Laminated Timber (CLT) and steel, and was prefabricated offsite, allowing for an exceptionally fast build-time of 3 weeks for the four floors. Finishing the block took place over 6 months.
Design for Service/Adaptability (DfSA)	**KB Building, Arnhem** by Hofman Dujardin www.hofmandujardin.nl 	A former nylon factory is completely transformed into a unique office. A new framework of steel platforms is hung from the existing concrete structure. Vision and design complement each other in this co-creation of Dujardin and Bosch, situated in the cleantech campus Industriepark Kleefse Waard in Arnhem, Netherlands. The new floors are constructed as light as possible, with open lattice girders in between the existing columns. The floor slabs with integrated ceiling panels are laid on top. As a result, the design not only continues the visual spaciousness, but also allows the transformation to be adapted or even reverted in the future, thereby ensuring the structure's flexibility to future needs.	**LocHal Tilburg by Arup** ARUP https://www.lochal.nl 	LocHal breathes life into this iconic industrial site of the former Dutch Railways building in Tilburg. The new mix-used building is a hub for knowledge sharing, housing the Midden-Brabant library, co-working spaces, and a host of local cultural hubs - including an investment fund and a regional knowledge institute. LocHal includes a variety of public hangouts, study and learning places including a café and reading room, bleacher-style seating for performances and presentations, and exhibition spaces. The design is based on flexible, user-led heating: seating on the bleacher stands which are heated and cooled, while all the smaller offices have their own temperature control. Working with a sequential approach, the engineers and designers sought to maximize and re-use all the different heritage elements of the hall.

Design for Disassembly/ Reuse/ Manufacture (DfDRM)	**Superlocal Project, Kerkrade** www.superlocal.eu 	The Superlocal project in Kerkrade, Netherlands entails the demolition of 10-storey apartment blocks into components ranging from complete apartments to concrete aggregates for use in building new houses and construction of 100 new homes in a district facing population decline and threat of vacant occupancy. Three construction techniques were used: 1) removal of an entire studio unit and reusing the hull as shell for new houses; 2) remanufacturing concrete bricks that can be stacked on top of each other without cementing them but using steel tension cables or rods to form a concrete wall, thus facilitating disassembly at end-of-life for reuse; and 3) retrieving concrete rubble from demolition to be upcycled into new circular concrete that reduces use of new cement and water. This project combines retain, reuse, and refit stages in circularity with elements of designing for disassembly and designing for adaptability using Cheshire's (2016) framework.	**Building D(emountable) Delft by Cepezed** https://cepezed.nl 	Building D is a modern, sustainable, and fully demountable structure on the site of a historic, monumental building complex in the center of Dutch city Delft. This site is owned by Cepezed, an agency with expertise in the development and design of buildings. This is a full-blown own development of Cepezed, and it is intended for companies in the knowledge-intensive creative industry. It houses the app and website developer, 9 to 5 software, and a game developer Triumph Studios. Building D is completely flexible to use and rent out and is fully demountable. The components are easy to reuse or recycle, while the building can be reassembled in an entirely different place in the future. The office building has been constructed from an absolute minimum of materials, with connections that are also easy to detach. In addition to being demountable and remountable, the structure is also super lightweight: the use of materials is kept to an absolute minimum. The building is also completely flexible in its arrangement, has no gas connection and is equipped with heat recovery. The complete structure of steel skeleton and wooden floors was put together in three weeks.
Design out Waste for Material Recovery (DfWMR)	**Villa Welpeloo, by Superuse Studios** www.superuse-studios.com 	A house in the Roombeek district in Enschede, Villa Welpeloo is a home for a couple with the wish to display and preserve a collection of paintings and graphic work by young contemporary artists. Superuse strived for the greatest possible use of recycled materials. The materials found result in new shapes and new ways of construction. The supporting structure is made of steel girders of a paternoster, previously used in the textile industry that was very important for the region. Superuse calls searching, finding, and dismantling reusable building materials 'harvesting'. For this purpose, Superuse founded the platform Harvestkaart.nl used by Superuse but also by other architects, design professionals and project developers.	**PET Pavilion Enschede by Loos.fm** https://loos.fm/en/project-pet-pavilion.php 	The PET Pavilion was created using compressed plastic bottles to form the walls of a huge community structure. This eco-friendly building is the centerpiece of a formerly abandoned wasteland which has been transformed into a community-driven public space. PET, or polyethylene terephthalate, is a popular type of plastic often used to create the bulk of the world's packaging such as soft drink bottles and other liquid containers. It features a section of allotted gardens for the surrounding neighborhood and exhibition space for local art festivals to be held in and around the PET Pavilion itself. During daytime, the PET Pavilion's interior is lit up by the translucent containers with kaleidoscopic colors, giving the community events taking place inside a unique atmosphere. The PET pavilion is also sub-rented for conferences, meetings, and activities.

Design for Longevity (DfL)	**Superlofts and Open Building by** www.openbuilding.com 	Superlofts uses a flexible and open framework that easily adapts to changing cycles of use and maintenance to facilitate a circular and resilient way of construction. Its building systems can be updated in independent cycles without wasting materials or demolishing the building. For example, the support structure can be used endlessly, facades are updated every 25 years, installations (HVAC systems) every decade and interiors every 5 years. Each system can be reused or recycled in independent cycles, tapping into the emerging circular economy. The Open Building structure develops architecture, production methods and financial strategies to extend the lifespan of building by at least 150 years. The support structure and infill are separated to provide maximum flexibility and adaptability. It also allows services/ installations to be easily renewed, independent of the building structure, according to the latest technologies.	**Marga Klompe Building Tilburg by Powerhouse Company** www.powerhouse-company.com 	Dutch studio Powerhouse Company has created the Marga Klompé Building at Tilburg University, which is "the first college building in Europe to be entirely constructed from solid wood". Situated on a forested university campus, the cuboid building has a mass timber structure and facades clad in Portuguese stone. The main structure and internal wood finishes were made from pine, while the external columns punctuating glazing on the ground floor were made from larch. Cross-laminated timber (CLT) floors were reinforced with beams to allow for large column-free spans in the 33-by-33-metre building. The facade was clad in Portuguese stone, which was chosen because of its long lifespan and ability to be disassembled. The studio opted for a combination of wood and stone for the university building for sustainability reasons as well as aesthetic, resembling the surrounding trees and other nearby buildings on the campus. A central atrium was designed to help ventilate the building and minimize the energy lost through the external walls, which were insulated with a material partly made from recycled denim. European oak was used for the flooring and doors in the university building, while window frames were made from Accoya wood. Textile waste that would otherwise be incinerated was used to create cotton insulation.

Annex Table 7
Circular Fashion in France

SAMPLE 1			SAMPLE 2	
Design Principle	**Case Company**	**Case Description**	**Case Company**	**Case Description**
Design for Bio-based Materials (DfBM)	**Olistic** OLISTIC the label www.olisticthelabel.com 	Founded in 2019, Olistic was born out of a desire to create fashion that is both sustainable and stylish, consisting of collections that are versatile with timeless, seasonless beauty. Olistic offers a new committed definition of the feminine wardrobe, combining minimalist silhouettes with a contemporary bohemian touch. Inspired by the adjective "holistic", Olistic the Label suggests a totality, a cycle of life where the human being is in harmony with his environment. The collection is designed with environmentally friendly materials such as peace silk, wood fiber and upcycling. Inspired by biomimicry, its collections are created from 100% natural fibers that are certified organic.	**Loom** LOOM https://www.loom.fr 	Loom is a member of En Mode Climat which is a coalition of 600 brands and manufacturers that support fairer and less polluting textile industry. The goal is not maximizing profits for shareholders but to make clothes that do not lead to human tragedies and ecological disasters. It is transparent about ethical sourcing of its factories as well as traceability of materials like organic cotton which is GOTS-certified, recycled cotton, recycled wool which is mulesing-free, recycled gum for sneakers and recycled polyester. The company educates its consumers not by posting ads but by its blogs, newsletter, and social media. The company also offers repair services and adopts a shipping threshold to reduce ecological impact of delivery. It chooses suppliers from France, Portugal, Spain, and Italy to ensure products are produced ethically with fair wages and working conditions.
Design for Service/Adaptability (DfSA)	**Panoply** www.panoplyofficial.com 	Panoply is a French fashion company that specializes in rental and second-hand clothing. They contribute to circular fashion by offering a platform where people can rent or buy high-quality used garments. This reduces demand for new clothing production and promotes the reuse of fashion items. It aims to alter the way women experience luxury fashion. Panoply's digitalized wardrobe allows them to change their style to fit all occasions. Like "Rent the Runway" in the USA, Panoply's business is split between "one-off" rentals and monthly subscribers. Subscriptions cost from €120 a month to rent 1-6 outfits for a week to €400 a month to rent up to 26 pieces for 4 to 8 days. Panoply is also offering an unlimited subscription package. If one does not wish to subscribe, individual rent is available at the price of €30.	**Vestiaire Collective** V. fr.vestiairecollective.com 	Vestiaire Collective offers a resale platform for customers owning designer fashion items like clothes, shoes, bags. It offers an authentication service to prevent fake products from being sold on the platform with 140 experts who underwent training for quality control and digital and physical authentication. Customers who would like to sell their items make an appointment with the company who collects the item to undergo authentication with a suggested list of prices from the experts. Once validated, the item is sent to the new owner. Sellers are allowed to recover up to 85% of the original price paid by the owner which are shipped for free by the collective. The company issues an impact report which monetizes the environmental, economic, and social value of second-hand compared to first-hand purchases. Since 2009, membership has grown to 6 million fashion-savvy clients spread over 50 countries. It has a diverse workforce of 67 nationalities, mostly women.

Design for Disassembly/ Reuse/ Manufacture (DfDRM)	**Gaelle Constantini** www.gaelleconstantini.com 	The Atelier Gaëlle Constantini **is a** brand of feminine and eco-responsible ready-to-wear clothing**,** made in France and created in 2010. Reconstruction is the process where designers can reconstruct old and unwanted clothing to make something new and desirable. The designer works on the principle of upcycling which, by definition, is the action of recycling from above. To make her unique and trendy pieces, she uses as raw materials worn textiles, found in flea markets or in thrift shops. Thus, the brand puts forward the concept of upcycling**,** an increasingly popular technique which consists in transforming unused materials and giving them a second life. In this case, it is about collecting, buying, recovering "second-hand" textiles, and transforming them to create new clothes.	**Decathlon Negombo Swimwear** www.decathlon.co 	Decathlon is a French sporting goods chain involved in sustainability from design to production to transportation of its products. It has teamed up with Belgian company Resortecs to create a recyclable swimwear collection that uses the SmartStitch technology for thermally dissolvable sewing threads. The different components of the swimwear can be separated with ease at the end of their useful life. In its swimwear collection, the company provides elasticity without using elastane which are fused with spandex and nylon making it difficult to disassemble. In its design approach, the company uses recycled polyester filaments from plastic bottles which uses less carbon compared to virgin polyester. In its production, life cycle analysis tool Glimpact is used to carry out environmental simulations for each product. It also uses production equipment that uses less energy. It also offers a Sports app for people to train and a repair and rental service.
Design out Waste for Material Recovery (DfWMR)	**Refashion** L'éco-organisme de la Filière Textile www.refashion.fr 	Refashion manages the prevention of waste and management of the end-of-service life of products on behalf of the 5,000 companies placing goods onto the market. Refashion works with brands and retailers to implement clothing take-back programs and recycling initiatives. It aims to reduce fashion waste by extending the lifecycle of clothing through recycling and repurposing. The company currently represents 95% of the French industry. Its current role is to address waste management and resource preservation by fostering the collection, recycling, and recovery of used textiles. On its website and mobile app, citizens can locate their nearest drop-off containers for used clothing. The platform also makes information on the social and environmental benefits of textiles recycling. Resources are also provided on how to repair and maintain clothing.	**Les Recuperables** https://lesrecuperables.com 	Les Recuperables is an ethical and responsible fashion brand using the practice of upcycling. The company uses fabric discards from upholstery luxury rolls, curtains, workwear fabric scraps to create or upcycle them into unique, feminine, and original pieces. The clothing brand collects the end of the stock of fabrics in workshops and factories to use them in its collections. Its clothes are made in integration workshops, allowing people in difficult situations to find an economic activity and a job that gives them pride and dignity. It manufactures locally to reduce its carbon footprint. It uses eco-friendly materials to limit the amount of chemicals, water and wastewater used in production. The final stage of production is undertaken in France.. It traces most of its supply chain including all the final and second stages of production. It does not use fur, leather, exotic animal skin, exotic animal hair or angora but uses recycled wool. It has partnered with Oxfam as it shares its triple approach of upcycling, French manufacturing, and social and solidarity economy.

Design for Longevity (DfL)	**Blank** blank www.blank.paris 	Blank researches creates customizable, modular clothing that can be easily transformed into different styles, reducing the need for purchasing multiple garments. Blank encourages consumers to be co-designers of their clothing, promoting conscious consumption and reducing waste. According to its website, the company values carbon-neutral, fair employment, innovation, organic materials, recycled materials, second-hand products, sustainable packaging, upcycling, vegan fabrics, and longevity. The brands featured have shifted their business models to prioritize longevity. They use durable, high-quality materials, offer repairs to help extend the lifespan of their products, and ensure clear communication on product care so that consumers know how to make things last. Purchasing their products will make the customer feel confident to wear it for the long run as the clothes will never be out of fashion.	**Ekyog** EKYOG https://ekyog.com 	Ekyog's team of designers, stylists, and product managers design, develop and manufacture timeless collections. They create garments designed to last, to be worn and worn again from one season to next. The company uses soft, natural, organic, and recycled materials; collaborates with men and women who work under ethical, social, and environmental conditions, and that take part in solidarity actions that move society forward. It banned polyester from its collections. Ekyog also offers a secondhand store for its collections on its website and an alteration and repair shop with its partner TILLI. It carefully selects the packaging and envelops that accompany the garments and parcels, considering current ecological and environmental imperatives. The company believes that clothes retain their ethical imprint from the moment they are designed, making its customers who want to wear them season after season which is the key to sustainable fashion.

Annex Table 8
Circular Construction in France

SAMPLE 1			SAMPLE 2	
Design Principle	**Case Company**	**Case Description**	**Case Company**	**Case Description**
Design for Bio-based Materials (DfBM)	**Rehafutur Engineer's House** rēhafūtur www.rehafutur.fr 	The French project Rehafutur Engineer's House is unique in that renewable eco-materials such as flax fiber, wood fiber, hemp bricks, sheep wool, recycled textile and the like were used as insulation materials. The project also involves preservation of cultural heritage. It renovated a typical mining house into offices in the Loos-en-Gohelle region in Northern France, which is a UNESCO-listed historical site. This is one of the projects under the EU-sponsored CAPEM (Cycle Assessment Procedure for Eco-Impacts of Materials) consisting of improving the building thermal insulation. Because of the historical value, the external façade could not be touched so that retrofitting could only be done in the interiors. Reuse of existing materials were applied by moving two marble fireplaces as ornamental pieces in public rooms; by relaying 62 square meters of hundred-year-old spruce floorboards after careful dismantling to install new flooring insulation; by reusing 18 square meters of multi-colored cement tiles; and by repaving the parking spaces and access paths with 350 square meters of rubble.	**Pierre Chevet Sports Hall by Lemoal Lemoal** lemoal lemo architectes www.lemoal-lemoal.com 	The Pierre Chevet sports hall is made from hempcrete (a mix of hemp, lime, and water) blocks and has become the world's very first carbon-negative public building. Research has proved that hemp is one of the best carbon dioxide-to-biomass converters. Per hectare of growing industrial hemp absorbs between 8 and 15 tons of carbon dioxide. Hemp grows 100 times faster than an oak tree and is lighter and less expensive than wood. Lemoal Lemoal, the studio that built Pierre Chevet sports hall, believes that hemp is a viable alternative to concrete, because a hemp wall appears more rustic and less sophisticated than concrete. Hempcrete is now more expensive than concrete, but thanks to its insulating capabilities, it may be more cost effective in the long run by lowering energy expenditures. These hempcrete blocks have been chosen for their many comfort and safety-enhancing qualities, among which are their high thermal, acoustical, Hempcretes are made of hemp hurds, an agricultural material obtained from hemp stalk of plants. Lighter than traditional concrete blocks, these hemp blocks are made from hemp fibers which are grown and assembled in France within 500 km of the construction site hence shortening the supply chain. This has helped in minimizing transportation emissions and has boosted the local economy.
Design for Service/Adaptability (DfSA)	**Student Residence and Reversible Car Park, Palaiseau by** BRUTHER www.divisare.com	This project involves a student residence and a reversible car park in Palaiseau. The concept of reversibility is a key feature of circular construction, where buildings are designed to be adaptable and easily transformed for different uses over time, minimizing demolition and waste. Architects Bru and Theriot (Bruther) Studio created a U-shaped building currently housing four floors of	**SEED by GA Smart Buildings** ga SMART BUILDING https://www.ga.fr	SEED is a program with a surface area of 2,800 m², designed to be fully convertible offices/laboratories. The SEED convertible office/ laboratory complex can be easily adapted for a wide variety of uses. The office floors are delivered ready to fit out and the laboratories are delivered in an unfinished state, fluids on standby, which enables future users to take over the premises as they wish. It has a variety of uses, acting as a place for socializing and for formal and informal meetings. The

		light-filled student accommodation, plus large spaces for collective activities, and nearly 500 car parking spaces. Its design means these allocations can be easily adjusted depending on what the neighborhood needs in the future. For example, the car park area could become extra accommodation, or house community facilities, and the courtyard layout is intended to provide space for another architect to add a structure if requirements change.		design of the architecture and the landscape is based on the concept of biophilia, with the aim of reconnecting people and nature. SEED benefits from GA Smart Building's off-site construction method that involves producing the various elements in the Group's French factories. All materials are then transported directly to the site which offers significant advantages— reduction in construction time, minimal disturbance to residents and reduced carbon footprint. SEED is an ambitious project in terms of social inclusion and is aiming to obtain the Accessibility Label that takes on board different kinds of disability.
Design for Disassembly/ Reuse/ Manufacture (DfDRM)	**Plug in City75 by Malka Architecture** STUDIO MALKA www.forbes.com 	Plug-in City 75 is a project by Malka Architecture that explores modular and adaptable construction methods. The project envisions an evolving urban environment where buildings can be easily expanded or modified to accommodate changing needs. Malka introduced boxed extensions that could reduce the structure's energy consumption to a quarter. The boxes would be fabricated off-site using a responsibly sourced wood, before being "plugged" into the building's exterior, called *parasitic architecture.* Each modular box responds to the requirements of each occupant and could be tailored to their needs. The idea behind the project is to inhabit the façades, increasing user space by growing outward rather than upward. The architects follow the logic of mutation and transformation of existing architectural heritage — superposition, addition, and extension – instead of tearing a building down and starting from a blank slate, while meeting stringent green-design standards. The box extensions can also be easily dismounted or reconfigured or extended if owners wish to expand.	**Maison Tournesol** maison TOURNESOL www.maisontournesol.fr 	Maison Tournesol, a small French business in Toulouse, is saving construction waste from landfill by turning it into stylish tables, shelves, and chairs. Maison Tournesol helps save two tons of waste and six tons of CO2 emissions. The Toulouse workshop is filled with iron rods, metal structures and aluminum panels rescued from the junkyard. Maison Tournesol salvages construction waste to create stylish, bespoke furniture. Founded by four young French architects in 2019, their sustainable approach aligns with the principles of a circular economy, where materials are endlessly reused and recycled, resulting in minimal waste and resource preservation. Sleek and easy to assemble, mixing metal and wood, the first "Zero" furniture range – for zero carbon, zero waste and zero effort – was launched in 2022. Building on the success achieved, Maison Tournesol is launching its second collection, called "Mono" because it is unicolored.

Design out Waste for Material Recovery (DfWMR)	**Circular Pavillon by Encore Heureux Architects** ENCORE HEUREUX www.archdaily.com 	The Circular Pavilion by Encore Heureux Architects highlights the use of reclaimed and recycled materials, demonstrating the potential for creating functional spaces while minimizing environmental impact. Encore Heureux built a pavilion outside Paris' city hall featuring a facade made from reclaimed doors and insulation recycled from an old supermarket roof. Named Circular Pavilion, it refers to the construction approach rather than the shape. The building's most unusual feature is its door-covered facade. The architects sourced 180 of the oak doors from housing under renovation in Paris' 19th arrondissement. The pavilion demonstrates that access to new material deposits relies on new relationships with those in charge of deconstructing and dismantling buildings, the ones who salvage and implement materials.	**Valobat** valobat https://valobat.fr 	Valobat's range of services addresses the key EPR regulations that may concern building stakeholders to simplify their compliance by means of a one-stop shop. The company's mission is to set up the collection, sorting, recycling, and recovery of construction and building products and materials. Through its network of suitable collection points, the construction and building producers of waste can transfer to Valobat their obligations related to EPR. Valobat supports client members on the administrative aspect and also with a complete range of services adapted to issues of the overall life of their products. It provides services for its producer-members (upstream) and holders of construction and building waste (downstream) by : (i) being territorially and sectorally close to the actors; (ii) providing technical expertise on both the core business and support functions; (iii) contributing to the company's societal performance by putting the issues of gender equality, inclusion and diversity at the heart of its project; and (iv) developing a corporate project shared by all employees around the company values.
Design for Longevity (DfL)	**Paris XII Apartments by Mars Architectes** MARS ARCHITECTES www.architectural-review.com 	The Paris XII Apartments designed by Mars Architectes focus on energy efficiency and sustainable materials. The project incorporates green spaces, natural lighting, and passive design strategies to create a comfortable and eco-friendly living environment. The project is in the twelfth district of Paris, completed in October 2020 is enclosed at the heart of a block, surrounded by an apartment complex built in the 1970s. The studio opted for a wooden construction both for the structure and the façade in response to French law for all public buildings to use 50% wood by 2030. A new carbon life-cycle assessment of buildings will promote bio-sourced materials such as timber. Reforestation is involved for each tree cut for the timber.	**Bureau Bassin des flots, Bordeaux France by VMZinc** VMZINC https://wwwvmzinc.com 	VMZINC is the international brand name of rolled zinc products manufactured and sold by VM Building Solutions. The products are quite exclusively produced in France. Zinc is among the most sustainable metals used in construction. It is a noble, durable, and robust metal with exceptional durability and great malleability. VMZINC develops innovative systems and products for roofing and facade, as well as rainwater systems, accessories and flashings and ornaments as part of the widest range of products for building envelops in the world. VMZINC rolled zinc is alloyed with copper and titanium to produce a material with optimum mechanical and physical characteristics for building applications. It protects itself against outdoor corrosion by developing a patina that gives it an exceptional long-life span. In addition to its long lifespan, zinc is a low maintenance material.

Annex Table 9
Scoring of the TBL Sustainability Dimensions for Dutch Fashion Case Companies

DUTCH FASHION										
	SAMPLE 1					SAMPLE 2				
CASE PROJECTS	Iron Roots	Mud Jeans	Wear2Go	Loop. a Life	Unrecorded	Top Vintage	Something Borrowed	Groenendijk	Circularity BV	Kings of Indigo
DESIGN PRINCIPLES	DfBM	DfS/A	DfD	DfMR	DfL	DfBM	DfS/A	DfD	DfMR	DfL
ENVIRONMENT						ENVIRONMENT				
Reduction GHG emissions	3	3	3	3	3	3	3	3	3	3
Savings water use	3	3	2	3	0	2	3	0	3	3
Savings energy consumption	3	3	1	2	0	3	3	2	3	3
Embodied energy & pollution	3	1	1	1	0	3	2	0	2	0
Solid waste reduction	3	3	3	3	3	3	3	3	3	3
Product life cycle extension	3	3	3	3	3	3	3	3	3	3
Use of biotic materials	3	2	0	3	3	3	0	2	0	3
Reduction exposure to toxicity	3	3	1	3	2	3	0	3	3	3
Land use	0	0	0	0	0	3	0	0	0	1
Endangered species/ animal welfare	0	0	0	0	3	3	0	0	3	0
Total Score ENVIRONMENT	2,40	2,33	1,56	2,33	1,56	2,90	1,70	1,60	2,30	2,20
Design rank	1	2	3	2	3	1	4	5	2	3
ECONOMIC						ECONOMIC				
Employment generation	3	3	3	3	3	3	2	3	2	2
Trade effects	3	1	1	2	3	3	1	2	0	0
Business creation & value chain	3	3	3	3	3	3	3	3	3	3
Financial self-sufficiency	3	3	3	2	1	3	3	3	0	0
Production/ Consumption patterns	3	3	3	3	3	3	3	1	3	3
Savings on maintenance costs	3	0	0	1	1	2	3	1	0	0
Higher residual values	0	2	1	0	0	2	3	0	0	0
Increase in investments in tech	3	3	3	3	1	1	1	3	2	3
Fiscal effects	0	0	0	0	0	0	0	2	0	0
Total Score ECONOMIC	2,33	2,00	1,89	1,89	1,67	2,22	2,11	2,00	1,11	1,22
Design Rank	1	2	3	3	4	1	2	3	5	4
SOCIAL						SOCIAL				
Stakeholder participation	3	3	3	3	3	3	3	3	3	2
Community engagement	2	1	2	3	2	3	3	3	1	2
Preservation of cultural heritage	0	0	0	0	1	3	0	0	0	0
Development of social capital	2	2	2	2	1	3	3	3	2	2
Regional inequality	3	2	2	3	3	1	0	0	0	0
Formation of human capital	3	2	2	2	0	0	1	3	1	0
Demographic transition	0	0	0	0	0	0	0	0	0	0
Social cohesion	2	1	0	1	1	3	3	3	2	1
Social inclusion	0	3	3	0	1	3	3	0	3	3
Child, migrant labor, human trafficking	0	0	3	0	0	0	0	0	2	0
Indigenous/local peoples	0	1	0	0	0	0	0	0	0	1
Human rights/ Fair labor conditions	3	3	3	1	2	3	0	2	2	3
Total Score SOCIAL	1,50	1,50	1,67	1,25	1,17	1,83	1,33	1,42	1,33	1,17
Design Rank	2	2	1	3	4	1	3	2	3	4
Average Rank	1,33	2,00	2,33	2,67	3,67	1,00	3,00	3,33	3,33	3,67
Dutch Fashion	DfBM	DfS/A	DfD	DfMR	DfL	DfBM	DfS/A	DfD	DfMR	DfL
Final Rank	1	2	3	4	5	1	2	3	3	4

Annex Table 10
Scoring of the TBL Sustainability Dimensions for French Fashion Case Companies

FRENCH FASHION										
	SAMPLE 1					SAMPLE 2				
CASE PROJECTS	Olistic	Panoply	Gaelle Constantini	Re Fashion	Blank	Loom	Vestiaire Collective	Decathlon	Les Recuperables	Ekyog
DESIGN PRINCIPLES	DfBM	DfS/A	DfD	DfMR	DfL	DfBM	DfS/A	DfD	DfMR	DfL
ENVIRONMENT						ENVIRONMENT				
Reduction GHG emissions	3	1	1	2	3	3	3	3	3	2
Savings water use	3	1	0	0	0	3	3	3	3	2
Savings energy consumption	0	0	0	0	1	3	3	3	1	1
Embodied energy & pollution	0	0	0	1	0	3	3	0	2	0
Solid waste reduction	3	2	2	3	3	3	3	3	3	3
Product life cycle extension	3	3	3	2	3	3	3	3	3	3
Use of biotic materials	3	0	0	0	3	3	0	2	1	3
Reduction exposure to toxicity	2	0	0	0	0	3	0	3	3	0
Land use	0	0	0	0	0	0	3	0	0	0
Endangered species/ animal welfare	0	0	0	0	0	3	0	3	3	0
Total Score ENVIRONMENT	**1,70**	**0,78**	**0,67**	**0,89**	**1,44**	**2,70**	**2,10**	**2,30**	**2,20**	**1,40**
Design rank	**1**	**4**	**5**	**3**	**2**	**1**	**4**	**2**	**3**	**5**
ECONOMIC						ECONOMIC				
Employment generation	3	1	3	3	1	3	3	3	3	2
Trade effects	0	0	0	2	0	2	2	0	0	0
Business creation & value chain	3	2	3	1	1	3	3	3	2	2
Financial self-sufficiency	2	3	2	2	0	3	3	3	2	1
Production/ Consumption patterns	3	3	3	1	3	3	3	3	3	3
Savings on maintenance costs	2	1	1	1	2	0	0	0	0	0
Higher residual values	3	1	0	1	0	0	0	0	3	0
Increase in investments in tech	3	3	1	1	2	3	1	3	0	0
Fiscal effects	0	0	0	0	0	0	0	2	0	0
Total Score ECONOMIC	**2,11**	**1,56**	**1,44**	**1,33**	**1,00**	**1,89**	**1,67**	**1,89**	**1,44**	**0,89**
Design Rank	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**1**	**3**	**4**
SOCIAL						SOCIAL				
Stakeholder participation	3	3	2	3	3	3	3	3	3	3
Community engagement	3	1	2	3	1	3	3	3	2	2
Preservation of cultural heritage	0	0	2	0	1	0	0	0	0	0
Development of social capital	3	3	3	3	2	3	3	3	2	2
Regional inequality	1	0	2	0	0	2	2	2	3	0
Formation of human capital	2	2	3	2	1	3	3	3	3	3
Demographic transition	0	0	1	0	0	0	0	0	0	0
Social cohesion	3	3	2	3	1	3	3	3	2	3
Social inclusion	3	2	3	0	0	3	3	3	3	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	1	0	0	1	0
Human rights/ Fair labor conditions	3	0	0	0	3	3	3	3	3	0
Total Score SOCIAL	**1,75**	**1,17**	**1,67**	**1,17**	**1,00**	**2,00**	**1,92**	**1,92**	**1,83**	**1,08**
Design Rank	**1**	**3**	**2**	**3**	**4**	**1**	**2**	**2**	**3**	**4**
Average Rank	**1,00**	**3,00**	**3,33**	**3,33**	**3,67**	**1,00**	**2,67**	**1,67**	**3,00**	**4,33**
Dutch Fashion	DfBM	DfS/A	DfD	DfMR	DfL	DfBM	DfS/A	DfD	DfMR	DfL
Final Rank	**1**	**2**	**3**	**3**	**4**	**1**	**3**	**2**	**4**	**5**

Annex Table 11
Scoring of the TBL Sustainability Dimensions for Dutch Construction Case Companies

DUTCH CONSTRUCTION										
	SAMPLE 1					SAMPLE 2				
CASE PROJECTS	Growing Pavilion	KB Building Arnhem	Superlocal Kerkrade	Villa Welpeloo Superuse Studios	Open Building Superlofts	Freebooter Amsterdam	LocHal Tilburg	Building D Delft	PET Pavilion Enschede	Marga Klompe Tilburg
DESIGN PRINCIPLES	DfBM	DfS/A	DfD	DfMR	DfL	DfBM	DfS/A	DfD	DfMR	DfL
ENVIRONMENT						ENVIRONMENT				
Reduction GHG emissions	3	3	3	3	3	2	3	2	2	3
Savings water use	2	2	2	1	2	0	0	0	0	0
Savings energy consumption	3	3	3	2	3	3	3	2	1	2
Embodied energy & pollution	3	2	1	1	0	2	2	2	0	0
Solid waste reduction	3	2	3	3	3	0	0	1	3	3
Product life cycle extension	3	3	3	3	3	2	3	3	3	3
Use of biotic materials	3	0	0	3	1	3	0	0	0	0
Reduction exposure to toxicity	0	2	2	1	0	0	0	0	0	0
Land use	1	1	0	0	1	2	3	3	3	0
Endangered species/ animal welfare	0	0	0	0	0	0	0	0	0	0
Total Score ENVIRONMENT	2,10	1,80	1,70	1,70	1,60	1,40	1,40	1,30	1,20	1,10
Design rank	1	2	3	3	4	1	1	2	3	4
ECONOMIC						ECONOMIC				
Employment generation	3	2	2	2	1	1	2	3	3	1
Trade effects	3	1	1	1	0	0	0	0	0	0
Business creation & value chain	3	2	1	2	2	2	3	3	3	1
Financial self-sufficiency	3	3	2	2	2	3	3	2	3	1
Production/ Consumption patterns	2	1	0	0	2	3	3	3	3	3
Savings on maintenance costs	1	3	2	2	3	3	3	2	0	2
Higher residual values	1	3	3	2	3	3	1	1	0	2
Increase in investments in tech	3	2	3	1	2	1	1	1	0	1
Fiscal effects	2	0	1	0	0	0	0	0	0	0
Total Score ECONOMIC	2,33	1,89	1,67	1,33	1,67	1,78	1,78	1,67	1,33	1,22
Design Rank	1	2	3	4	3	1	1	2	3	4
SOCIAL						SOCIAL				
Stakeholder participation	3	3	3	2	3	3	3	3	3	3
Community engagement	2	2	3	1	2	3	2	1	3	2
Preservation of cultural heritage	0	2	1	0	2	3	3	2	2	0
Development of social capital	2	1	1	2	1	2	2	3	3	2
Regional inequality	0	0	1	0	0	0	0	0	0	0
Formation of human capital	2	1	1	1	0	2	2	1	3	1
Demographic transition	0	0	2	0	0	0	0	0	0	0
Social cohesion	1	1	2	2	2	3	3	2	3	1
Social inclusion	0	0	0	2	0	0	0	0	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0	0	0	0	0	0	0	0	0	0
Total Score SOCIAL	0,83	0,83	1,17	0,83	0,83	1,33	1,25	1,00	1,42	0,75
Design Rank	2	2	1	2	2	2	3	4	1	5
Average Rank	1,33	2,00	2,33	3,00	3,00	1,33	1,67	2,67	2,33	4,33
Dutch Construction	DfBM	DfS/A	DfD	DfMR	DfL	DfBM	DfS/A	DfD	DfMR	DfL
Final Rank	1	2	3	4	4	1	2	3	4	5

Annex Table 12
Scoring of the TBL Sustainability Dimensions for French Construction Case Companies

FRENCH CONSTRUCTION											
	SAMPLE 1					SAMPLE 2				
CASE PROJECTS	Rehafutur	Palaiseau	Plug in City 75 Malka	Circular Pavilion	Paris XII Apartments	Pierre Chevet Sporthal	SEED, GA Smarts Building	Maison Tournesol	Valobat	VMZinc
DESIGN PRINCIPLES	DfBM	DfS/A	DfD	DfMR	DfL	DfBM	DfS/A	DfD	DfMR	DfL
ENVIRONMENT								ENVIRONMENT		
Reduction GHG emissions	3	3	2	1	3	3	3	3	1	1
Savings water use	2	0	0	1	0	0	0	0	0	0
Savings energy consumption	3	2	2	1	3	3	3	3	0	0
Embodied energy & pollution	3	1	1	1	2	1	3	0	0	0
Solid waste reduction	3	0	0	3	0	0	0	3	3	3
Product life cycle extension	3	3	3	3	3	2	2	3	2	3
Use of biotic materials	3	0	3	1	3	3	0	0	0	0
Reduction exposure to toxicity	3	0	0	0	0	0	0	0	1	1
Land use	3	3	1	0	0	1	1	0	0	0
Endangered species/ animal welfare	0	0	0	0	0	0	0	0	0	0
Total Score ENVIRONMENT	**2,60**	**1,20**	**1,20**	**1,10**	**1,40**	**1,30**	**1,20**	**1,20**	**0,70**	**0,80**
Design rank	**1**	**3**	**3**	**4**	**2**	**1**	**2**	**2**	**4**	**3**
ECONOMIC								ECONOMIC		
Employment generation	3	3	2	1	0	3	3	3	3	3
Trade effects	3	0	0	0	0	3	0	2	1	3
Business creation & value chain	3	3	3	3	3	3	3	3	3	3
Financial self-sufficiency	2	3	3	1	0	0	3	3	1	2
Production/ Consumption patterns	3	3	3	3	3	3	3	3	3	3
Savings on maintenance costs	3	0	1	0	1	2	0	0	1	3
Higher residual values	3	1	0	1	0	1	0	1	0	0
Increase in investments in tech	2	0	0	0	1	3	0	1	0	0
Fiscal effects	1	0	0	0	0	0	0	0	1	0
Total Score ECONOMIC	**2,56**	**1,44**	**1,33**	**1,00**	**0,89**	**2,00**	**1,33**	**1,78**	**1,44**	**1,89**
Design Rank	**1**	**2**	**3**	**4**	**5**	**1**	**5**	**3**	**4**	**2**
SOCIAL								SOCIAL		
Stakeholder participation	3	3	2	2	2	3	3	2	3	3
Community engagement	3	2	2	0	0	2	3	2	2	2
Preservation of cultural heritage	3	1	3	2	1	0	0	0	0	0
Development of social capital	2	3	1	1	1	2	1	2	2	2
Regional inequality	2	1	1	0	1	0	1	2	0	0
Formation of human capital	1	1	0	0	0	2	2	0	0	2
Demographic transition	0	0	0	0	1	0	0	0	0	0
Social cohesion	1	2	1	0	1	1	2	0	3	1
Social inclusion	0	0	0	0	0	0	3	0	3	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	1	0	0	0	0	1	0	1	0	0
Human rights/ Fair labor conditions	0	0	0	0	0	0	0	0	0	0
Total Score SOCIAL	**1,33**	**1,08**	**0,83**	**0,42**	**0,58**	**0,92**	**1,25**	**0,75**	**1,08**	**0,83**
Design Rank	**1**	**2**	**3**	**5**	**4**	**3**	**1**	**5**	**2**	**4**
Average Rank	**1,00**	**2,33**	**3,00**	**4,33**	**3,67**	**1,67**	**2,67**	**3,33**	**3,33**	**3,00**
Dutch Fashion	DfBM	DfS/A	DfD	DfMR	DfL	DfBM	DfS/A	DfD	DfMR	DfL
Final Rank	**1**	**2**	**3**	**5**	**4**	**1**	**2**	**3**	**4**	**4**

Annex Table 13
CRITIC Scoring of the TBL Sustainability Dimensions for Dutch Fashion Sample 1 and 2 Case Companies

DUTCH FASHION SAMPLE 1

ENVIRONMENT	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Reduction GHG emissions	0,057919	3	3	3	3	2	0,173756	0,173756	0,173756	0,173756	0,115837
Savings water use	0,158334	2	3	2	3	0	0,316668	0,475002	0,316668	0,475002	0
Savings energy consumption	0,122706	2	3	1	1	0	0,245411	0,368117	0,122706	0,122706	0
Embodied energy & pollution	0,135137	3	1	0	0	0	0,405411	0,135137	0	0	0
Solid waste reduction	0,06687	3	3	3	2	3	0,200611	0,200611	0,200611	0,133741	0,200611
Product life cycle extension	0	3	3	3	3	3	0	0	0	0	0
Use of biotic materials	0,168687	3	2	0	3	3	0,50606	0,337374	0	0,50606	0,50606
Reduction exposure to toxicity	0,105817	2	3	1	3	2	0,211633	0,31745	0,105817	0,31745	0,211633
Land use	0,102331	2	0	0	0	0	0,204663	0	0	0	0
Endangered species/ animal welfare	0,0822	0	0	0	0	1	0	0	0	0	0,0822
Total Score ENVIRONMENT	1						2,26	2,01	0,92	1,73	1,12
Country Rank							1	2	5	3	4

ECONOMIC	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Employment generation	0	2	3	3	3	3	0	0	0	0	0
Trade effects	0,2322	2	1	1	2	3	0,4644	0,2322	0,2322	0,4644	0,6966
Business creation & value chain	0	3	3	3	3	3	0	0	0	0	0
Financial self-sufficiency	0,161819	3	3	3	2	1	0,485458	0,485458	0,485458	0,323639	0,161819
Consumption patterns	0	3	3	3	3	3	0	0	0	0	0
Savings on maintenance costs	0,244812	2	0	0	0	1	0,489623	0	0	0	0,244812
Higher residual values	0,195089	1	2	1	0	0	0,195089	0,390178	0,195089	0	0
Increase in investments in tech	0,16608	3	3	3	3	1	0,49824	0,49824	0,49824	0,49824	0,16608
Fiscal effects	0	0	0	0	0	0	0	0	0	0	0
Total Score ECONOMIC	1						2,13281	1,606076	1,410987	1,286279	1,269311
Country Rank							1	2	3	4	5

SOCIAL	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Stakeholder participation	0,08685	2	3	3	3	3	0,173701	0,260551	0,260551	0,260551	0,260551
Community engagement	0,087996	1	1	1	1	2	0,087996	0,087996	0,087996	0,087996	0,175992
Preservation of cultural heritage	0,100749	0	0	0	0	1	0	0	0	0	0,100749
Development of social capital	0,088743	2	2	2	2	1	0,177486	0,177486	0,177486	0,177486	0,088743
Regional inequality	0,22678	3	2	2	3	0	0,680339	0,453559	0,453559	0,680339	0
Formation of human capital	0,165595	2	2	2	1	0	0,331191	0,331191	0,331191	0,165595	0
Demographic transition	0	0	0	0	0	0	0	0	0	0	0
Social cohesion	0,14818	2	1	0	0	1	0,29636	0,14818	0	0	0,14818
Social inclusion	0	0	0	0	0	0	0	0	0	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0,095107	0	0	0	1	0	0	0	0	0,095107	0
Total Score SOCIAL	1						1,747072	1,458963	1,310783	1,467074	0,774215
Country Rank							1	3	4	2	5

SUMMARY	DfBM	DfSA	DfDRM	DfWMR	DfL
Average Rank	1	2,33	4,00	3,00	4,67
FINAL RANKING	1	2	4	3	5

DUTCH FASHION SAMPLE 2

ENVIRONMENT	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Reduction GHG emissions	0	3	3	3	3	2	0	0	0	0	0
Savings water use	0,156367	2	3	2	3	0	0,312734	0,469101	0,312734	0,469101	0
Savings energy consumption	0,047041	2	3	1	1	0	0,094081	0,141122	0,047041	0,047041	0
Embodied energy & pollution	0,145312	3	1	0	0	0	0,435937	0,145312	0	0	0
Solid waste reduction	0	3	3	3	2	3	0	0	0	0	0
Product life cycle extension	0	3	3	3	3	3	0	0	0	0	0
Use of biotic materials	0,19065	3	2	0	3	3	0,571951	0,381301	0	0,571951	0,571951
Reduction exposure to toxicity	0,168522	2	3	1	3	2	0,337045	0,505567	0,168522	0,505567	0,337045
Land use	0,127147	2	0	0	0	0	0,254295	0	0	0	0
Endangered species/ animal welfare	0,16496	0	0	0	0	1	0	0	0	0	0,16496
Total Score ENVIRONMENT	1						2,01	1,64	0,53	1,59	1,07
Country Rank							1	2	5	3	4

ECONOMIC	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Employment generation	0,066455	2	3	3	3	3	0,13291	0,199365	0,199365	0,199365	0,199365
Trade effects	0,130071	2	1	1	2	3	0,260141	0,130071	0,130071	0,260141	0,390212
Business creation & value chain	0	3	3	3	3	3	0	0	0	0	0
Financial self-sufficiency	0,152779	3	3	3	2	1	0,458336	0,458336	0,458336	0,305557	0,152779
Consumption patterns	0,108521	3	3	3	3	3	0,325562	0,325562	0,325562	0,325562	0,325562
Savings on maintenance costs	0,12693	2	0	0	0	1	0,253859	0	0	0	0,12693
Higher residual values	0,147619	1	2	1	0	0	0,147619	0,295239	0,147619	0	0
Increase in investments in tech	0,159105	3	3	3	3	1	0,477316	0,477316	0,477316	0,477316	0,159105
Fiscal effects	0,108521	0	0	0	0	0	0	0	0	0	0
Total Score ECONOMIC	1						2,055744	1,885889	1,738269	1,567942	1,353953
Country Rank							1	2	3	4	5

SOCIAL	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Stakeholder participation	0,099034	2	3	3	3	3	0,198068	0,297102	0,297102	0,297102	0,297102
Community engagement	0,077822	1	1	1	1	2	0,077822	0,077822	0,077822	0,077822	0,155644
Preservation of cultural heritage	0,079603	0	0	0	0	1	0	0	0	0	0,079603
Development of social capital	0,075143	2	2	2	2	1	0,150286	0,150286	0,150286	0,150286	0,075143
Regional inequality	0,218002	3	2	2	3	0	0,654005	0,436004	0,436004	0,654005	0
Formation of human capital	0,201469	2	2	2	1	0	0,402937	0,402937	0,402937	0,201469	0
Demographic transition	0	0	0	0	0	0	0	0	0	0	0
Social cohesion	0,145592	2	1	0	0	1	0,291184	0,145592	0	0	0,145592
Social inclusion	0	0	0	0	0	0	0	0	0	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0,103336	0	0	0	1	0	0	0	0	0,103336	0
Total Score SOCIAL	1						1,774303	1,509743	1,364151	1,48402	0,753084
Country Rank							1	2	4	3	5

SUMMARY	DfBM	DfSA	DfDRM	DfWMR	DfL
Average Rank	1	2,00	4,00	3,33	4,67
FINAL RANKING	1	2	4	3	5

Annex Table 14
CRITIC Scoring of the TBL Sustainability Dimensions for French Fashion Sample 1 and 2 Case Companies

FRENCH FASHION SAMPLE 1

ENVIRONMENT	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Reduction GHG emissions	0,129307	3	1	1	2	3	0,387922	0,129307	0,129307	0,258615	0,387922
Savings water use	0,188654	3	1	0	0	0	0,565961	0,188654	0	0	0
Savings energy consumption	0,083516	0	0	0	0	1	0	0	0	0	0,083516
Embodied energy & pollution	0,098298	0	0	0	1	0	0	0	0	0,098298	0
Solid waste reduction	0,077307	3	2	2	3	3	0,231922	0,154615	0,154615	0,231922	0,231922
Product life cycle extension	0,087293	3	3	3	2	3	0,261879	0,261879	0,261879	0,174586	0,261879
Use of biotic materials	0,215414	3	0	0	0	3	0,646242	0	0	0	0,646242
Reduction exposure to toxicity	0,12021	2	0	0	0	0	0,24042	0	0	0	0
Land use	0	0	0	0	0	0	0	0	0	0	0
Endangered species/ animal welfare	0	0	0	0	0	0	0	0	0	0	0
Total Score ENVIRONMENT	1						2,33	0,73	0,55	0,76	1,61
Country Rank							1	4	5	3	2

ECONOMIC	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Employment generation	0,144901	3	1	3	3	1	0,434704	0,144901	0,434704	0,434704	0,144901
Trade effects	0,154759	0	0	0	2	0	0	0	0	0,309518	0
Business creation & value chain	0,112724	3	2	3	1	1	0,338172	0,225448	0,338172	0,112724	0,112724
Financial self-sufficiency	0,138513	2	3	2	2	0	0,277026	0,415539	0,277026	0,277026	0
Consumption patterns	0,125212	3	3	3	1	3	0,375637	0,375637	0,375637	0,125212	0,375637
Savings on maintenance costs	0,076871	2	1	1	1	2	0,153741	0,076871	0,076871	0,076871	0,153741
Higher residual values	0,12587	3	1	0	1	0	0,377611	0,12587	0	0,12587	0
Increase in investments in tech	0,121149	3	3	1	1	2	0,363448	0,363448	0,121149	0,121149	0,242299
Fiscal effects	0	0	0	0	0	0	0	0	0	0	0
Total Score ECONOMIC	1						2,320339	1,727715	1,623559	1,583075	1,029303
Country Rank							1	2	3	4	5

SOCIAL	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Stakeholder participation	0,073497	3	3	2	3	3	0,22049	0,22049	0,146993	0,22049	0,22049
Community engagement	0,105052	3	1	2	3	1	0,315156	0,105052	0,210104	0,315156	0,105052
Preservation of cultural heritage	0,110534	0	0	2	0	1	0	0	0,221069	0	0,110534
Development of social capital	0,043516	3	3	3	3	2	0,130548	0,130548	0,130548	0,130548	0,087032
Regional inequality	0,079022	1	0	2	0	0	0,079022	0	0,158044	0	0
Formation of human capital	0,065218	2	2	3	2	1	0,130435	0,130435	0,195653	0,130435	0,065218
Demographic transition	0,046921	0	0	1	0	0	0	0	0,046921	0	0
Social cohesion	0,095726	3	3	2	3	1	0,287178	0,287178	0,191452	0,287178	0,095726
Social inclusion	0,14214	3	2	3	0	0	0,426421	0,284281	0,426421	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0,238374	3	0	0	0	3	0,715121	0	0	0	0,715121
Total Score SOCIAL	1						2,304372	1,157984	1,727206	1,083808	1,399173
Country Rank							1	4	2	5	3

SUMMARY	DfBM	DfSA	DfDRM	DfWMR	DfL
Average Rank	1	3,33	3,33	4,00	3,33
FINAL RANKING	1	2	2	3	2

FRENCH FASHION SAMPLE 2

ENVIRONMENT	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Reduction GHG emissions	0,040185	3	1	1	2	3	0,120555	0,040185	0,040185	0,08037	0,120555
Savings water use	0,040185	3	1	0	0	0	0,120555	0,040185	0	0	0
Savings energy consumption	0,12115	0	0	0	0	1	0	0	0	0	0,12115
Embodied energy & pollution	0,152632	0	0	0	1	0	0	0	0	0,152632	0
Solid waste reduction	0	3	2	2	3	3	0	0	0	0	0
Product life cycle extension	0	3	3	3	2	3	0	0	0	0	0
Use of biotic materials	0,164206	3	0	0	0	3	0,492618	0	0	0	0,492618
Reduction exposure to toxicity	0,151539	2	0	0	0	0	0,303078	0	0	0	0
Land use	0,148378	0	0	0	0	0	0	0	0	0	0
Endangered species/ animal welfare	0,181725	0	0	0	0	0	0	0	0	0	0
Total Score ENVIRONMENT	1						1,04	0,08	0,04	0,23	0,73
Country Rank							1	4	5	3	2

ECONOMIC	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Employment generation	0,052468	3	1	3	3	1	0,157404	0,052468	0,157404	0,157404	0,052468
Trade effects	0,146789	0	0	0	2	0	0	0	0	0,293579	0
Business creation & value chain	0,067074	3	2	3	1	1	0,201221	0,134148	0,201221	0,067074	0,067074
Financial self-sufficiency	0,094499	2	3	2	2	0	0,188998	0,283497	0,188998	0,188998	0
Consumption patterns	0	3	3	3	1	3	0	0	0	0	0
Savings on maintenance costs	0	2	1	1	1	2	0	0	0	0	0
Higher residual values	0,281195	3	1	0	1	0	0,843586	0,281195	0	0,281195	0
Increase in investments in tech	0,200717	3	3	1	1	2	0,602152	0,602152	0,200717	0,200717	0,401435
Fiscal effects	0,157257	0	0	0	0	0	0	0	0	0	0
Total Score ECONOMIC	1						1,993362	1,35346	0,748341	1,188968	0,520977
Country Rank							1	2	4	3	5

SOCIAL	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Stakeholder participation	0	3	3	2	3	3	0	0	0	0	0
Community engagement	0,082132	3	1	2	3	1	0,246397	0,082132	0,164265	0,246397	0,082132
Preservation of cultural heritage	0	0	0	2	0	1	0	0	0	0	0
Development of social capital	0,082132	3	3	3	3	2	0,246397	0,246397	0,246397	0,246397	0,164265
Regional inequality	0,198903	1	0	2	0	0	0,198903	0	0,397806	0	0
Formation of human capital	0	2	2	3	2	1	0	0	0	0	0
Demographic transition	0	0	0	1	0	0	0	0	0	0	0
Social cohesion	0,087082	3	3	2	3	1	0,261245	0,261245	0,174164	0,261245	0,087082
Social inclusion	0,229464	3	2	3	0	0	0,688393	0,458929	0,688393	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0,114176	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0,20611	3	0	0	0	3	0,618331	0	0	0	0,618331
Total Score SOCIAL	1						2,259668	1,048704	1,671025	0,75404	0,95181
Country Rank							1	3	2	5	4

SUMMARY	DfBM	DfSA	DfDRM	DfWMR	DfL
Average Rank	1	3,00	3,67	3,67	3,67
FINAL RANKING	1	2	3	3	3

Annex Table 15
CRITIC Scoring of the TBL Sustainability Dimensions for Dutch Construction Sample 1 and 2 Case Companies

DUTCH CONSTRUCTION SAMPLE 1

ENVIRONMENT	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Reduction GHG emissions	0	3	3	3	3	2	0	0	0	0	0
Savings water use	0,06945	2	3	2	3	0	0,1389	0,20835	0,1389	0,20835	0
Savings energy consumption	0,06945	2	3	1	1	0	0,1389	0,20835	0,06945	0,06945	0
Embodied energy & pollution	0,182186	3	1	0	0	0	0,546558	0,182186	0	0	0
Solid waste reduction	0,088597	3	3	3	2	3	0,26579	0,26579	0,26579	0,177193	0,26579
Product life cycle extension	0	3	3	3	3	3	0	0	0	0	0
Use of biotic materials	0,295155	3	2	0	3	3	0,885465	0,59031	0	0,885465	0,885465
Reduction exposure to toxicity	0,206412	2	3	1	3	2	0,412823	0,619235	0,206412	0,619235	0,412823
Land use	0,088751	2	0	0	0	0	0,177501	0	0	0	0
Endangered species/ animal welfare	0	0	0	0	0	1	0	0	0	0	0
Total Score ENVIRONMENT	1						2,57	2,07	0,68	1,96	1,56
Country Rank							1	2	5	3	4

ECONOMIC	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Employment generation	0,09212	2	3	3	3	3	0,184239	0,276359	0,276359	0,276359	0,276359
Trade effects	0,153107	2	1	1	2	3	0,306213	0,153107	0,153107	0,306213	0,45932
Business creation & value chain	0,09212	3	3	3	3	3	0,276359	0,276359	0,276359	0,276359	0,276359
Financial self-sufficiency	0,068077	3	3	3	2	1	0,204232	0,204232	0,204232	0,136155	0,068077
Consumption patterns	0,130277	3	3	3	3	3	0,390831	0,390831	0,390831	0,390831	0,390831
Savings on maintenance costs	0,117868	2	0	0	0	1	0,235736	0	0	0	0,117868
Higher residual values	0,1244	1	2	1	0	0	0,1244	0,248801	0,1244	0	0
Increase in investments in tech	0,105508	3	3	3	3	1	0,316524	0,316524	0,316524	0,316524	0,105508
Fiscal effects	0,116523	0	0	0	0	0	0	0	0	0	0
Total Score ECONOMIC	1						2,038535	1,866213	1,741812	1,702441	1,694322
Country Rank							1	2	3	4	5

SOCIAL	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Stakeholder participation	0,08685	2	3	3	3	3	0,173701	0,260551	0,260551	0,260551	0,260551
Community engagement	0,087996	1	1	1	1	2	0,087996	0,087996	0,087996	0,087996	0,175992
Preservation of cultural heritage	0,100749	0	0	0	0	1	0	0	0	0	0,100749
Development of social capital	0,088743	2	2	2	2	1	0,177486	0,177486	0,177486	0,177486	0,088743
Regional inequality	0,22678	3	2	2	3	0	0,680339	0,453559	0,453559	0,680339	0
Formation of human capital	0,165595	2	2	2	1	0	0,331191	0,331191	0,331191	0,165595	0
Demographic transition	0	0	0	0	0	0	0	0	0	0	0
Social cohesion	0,14818	2	1	0	0	1	0,29636	0,14818	0	0	0,14818
Social inclusion	0	0	0	0	0	0	0	0	0	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0,095107	0	0	0	1	0	0	0	0	0,095107	0
Total Score SOCIAL	1						1,747072	1,458963	1,310783	1,467074	0,774215
Country Rank							1	3	4	2	5

SUMMARY	DfBM	DfSA	DfDRM	DfWMR	DfL
Average Rank	1	2,33	4,00	3,00	4,67
FINAL RANKING	1	2	4	3	5

DUTCH CONSTRUCTION SAMPLE 2

ENVIRONMENT	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Reduction GHG emissions	0,074062	3	3	3	3	2	0,222186	0,222186	0,222186	0,222186	0,148124
Savings water use	0	2	3	2	3	0	0	0	0	0	0
Savings energy consumption	0,108286	2	3	1	1	0	0,216571	0,324857	0,108286	0,108286	0
Embodied energy & pollution	0,13662	3	1	0	0	0	0,409859	0,13662	0	0	0
Solid waste reduction	0,268319	3	3	3	2	3	0,804958	0,804958	0,804958	0,536638	0,804958
Product life cycle extension	0,060471	3	3	3	3	3	0,181414	0,181414	0,181414	0,181414	0,181414
Use of biotic materials	0,174541	3	2	0	3	3	0,523624	0,349083	0	0,523624	0,523624
Reduction exposure to toxicity	0	2	3	1	3	2	0	0	0	0	0
Land use	0,177701	2	0	0	0	0	0,355402	0	0	0	0
Endangered species/ animal welfare	0	0	0	0	0	1	0	0	0	0	0
Total Score ENVIRONMENT	1						2,71	2,02	1,32	1,57	1,66
Country Rank							1	2	5	4	3

ECONOMIC	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Employment generation	0,193234	2	3	3	3	3	0,386468	0,579702	0,579702	0,579702	0,579702
Trade effects	0	2	1	1	2	3	0	0	0	0	0
Business creation & value chain	0,172834	3	3	3	3	3	0,518501	0,518501	0,518501	0,518501	0,518501
Financial self-sufficiency	0,185172	3	3	3	2	1	0,555516	0,555516	0,555516	0,370344	0,185172
Consumption patterns	0	3	3	3	3	3	0	0	0	0	0
Savings on maintenance costs	0,188472	2	0	0	0	1	0,376945	0	0	0	0,188472
Higher residual values	0,187096	1	2	1	0	0	0,187096	0,374192	0,187096	0	0
Increase in investments in tech	0,073192	3	3	3	3	1	0,219576	0,219576	0,219576	0,219576	0,073192
Fiscal effects	0	0	0	0	0	0	0	0	0	0	0
Total Score ECONOMIC	1						2,244102	2,247487	2,060391	1,688123	1,545039
Country Rank							2	1	3	4	5

SOCIAL	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Stakeholder participation	0,095135	2	3	3	3	3	0,19027	0,285406	0,285406	0,285406	0,285406
Community engagement	0,083494	1	1	1	1	2	0,083494	0,083494	0,083494	0,083494	0,166988
Preservation of cultural heritage	0,08091	0	0	0	0	1	0	0	0	0	0,08091
Development of social capital	0,094253	2	2	2	2	1	0,188505	0,188505	0,188505	0,188505	0,094253
Regional inequality	0,260539	3	2	2	3	0	0,781616	0,521077	0,521077	0,781616	0
Formation of human capital	0,150596	2	2	2	1	0	0,301192	0,301192	0,301192	0,150596	0
Demographic transition	0	0	0	0	0	0	0	0	0	0	0
Social cohesion	0,139938	2	1	0	0	1	0,279877	0,139938	0	0	0,139938
Social inclusion	0	0	0	0	0	0	0	0	0	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0,095135	0	0	0	1	0	0	0	0	0,095135	0
Total Score SOCIAL	1						1,824954	1,519612	1,379674	1,584752	0,767495
Country Rank							1	3	4	2	5

SUMMARY	DfBM	DfSA	DfDRM	DfWMR	DfL
Average Rank	1,333333	2,00	4,00	3,33	4,33
FINAL RANKING	1	2	4	3	5

Annex Table 16
CRITIC Scoring of the TBL Sustainability Dimensions for French Construction Sample 1 and 2 Case Companies

FRENCH CONSTRUCTION SAMPLE 1

ENVIRONMENT	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Reduction GHG emissions	0,124873	3	3	3	3	2	0,374619	0,374619	0,374619	0,374619	0,249746
Savings water use	0,08125	2	3	2	3	0	0,162499	0,243749	0,162499	0,243749	0
Savings energy consumption	0,088244	2	3	1	1	0	0,176488	0,264732	0,088244	0,088244	0
Embodied energy & pollution	0,073575	3	1	0	0	0	0,220725	0,073575	0	0	0
Solid waste reduction	0,184005	3	3	3	2	3	0,552016	0,552016	0,552016	0,368011	0,552016
Product life cycle extension	0	3	3	3	3	3	0	0	0	0	0
Use of biotic materials	0,162635	3	2	0	3	3	0,487904	0,32527	0	0,487904	0,487904
Reduction exposure to toxicity	0,106518	2	3	1	3	2	0,213035	0,319553	0,106518	0,319553	0,213035
Land use	0,1789	2	0	0	0	0	0,357801	0	0	0	0
Endangered species/ animal welfare	0	0	0	0	0	1	0	0	0	0	0
Total Score ENVIRONMENT	1						2,55	2,15	1,28	1,88	1,50
Country Rank							1	2	5	3	4

ECONOMIC	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Employment generation	0,20737	2	3	3	3	3	0,41474	0,622109	0,622109	0,622109	0,622109
Trade effects	0,139058	2	1	1	2	3	0,278117	0,139058	0,139058	0,278117	0,417175
Business creation & value chain	0	3	3	3	3	3	0	0	0	0	0
Financial self-sufficiency	0,208868	3	3	3	2	1	0,626605	0,626605	0,626605	0,417737	0,208868
Consumption patterns	0	3	3	3	3	3	0	0	0	0	0
Savings on maintenance costs	0,134103	2	0	0	0	1	0,268206	0	0	0	0,134103
Higher residual values	0,135848	1	2	1	0	0	0,135848	0,271696	0,135848	0	0
Increase in investments in tech	0,103625	3	3	3	3	1	0,310876	0,310876	0,310876	0,310876	0,103625
Fiscal effects	0,071127	0	0	0	0	0	0	0	0	0	0
Total Score ECONOMIC	1						2,034391	1,970345	1,834497	1,628839	1,485881
Country Rank							1	2	3	4	5

SOCIAL	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Stakeholder participation	0,10517	2	3	3	3	3	0,210341	0,315511	0,315511	0,315511	0,315511
Community engagement	0,074495	1	1	1	1	2	0,074495	0,074495	0,074495	0,074495	0,14899
Preservation of cultural heritage	0,102498	0	0	0	0	1	0	0	0	0	0,102498
Development of social capital	0,082145	2	2	2	2	1	0,164291	0,164291	0,164291	0,164291	0,082145
Regional inequality	0,21772	3	2	2	3	0	0,653161	0,435441	0,435441	0,653161	0
Formation of human capital	0,153778	2	2	2	1	0	0,307556	0,307556	0,307556	0,153778	0
Demographic transition	0	0	0	0	0	0	0	0	0	0	0
Social cohesion	0,159022	2	1	0	0	1	0,318045	0,159022	0	0	0,159022
Social inclusion	0	0	0	0	0	0	0	0	0	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0,10517	0	0	0	1	0	0	0	0	0,10517	0
Total Score SOCIAL	1						1,727888	1,456316	1,297294	1,466406	0,808167
Country Rank							1	3	4	2	5

SUMMARY	DfBM	DfSA	DfDRM	DfWMR	DfL
Average Rank	1	2,33	4,00	3,00	4,67
FINAL RANKING	1	2	4	3	5

FRENCH CONSTRUCTION SAMPLE 2

ENVIRONMENT	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Reduction GHG emissions	0,119186	3	3	3	3	2	0,357559	0,357559	0,357559	0,357559	0,238373
Savings water use	0	2	3	2	3	0	0	0	0	0	0
Savings energy consumption	0,179408	2	3	1	1	0	0,358816	0,538225	0,179408	0,179408	0
Embodied energy & pollution	0,140509	3	1	0	0	0	0,421526	0,140509	0	0	0
Solid waste reduction	0,227498	3	3	3	2	3	0,682494	0,682494	0,682494	0,454996	0,682494
Product life cycle extension	0,059593	3	3	3	3	3	0,17878	0,17878	0,17878	0,17878	0,17878
Use of biotic materials	0,144582	3	2	0	3	3	0,433747	0,289164	0	0,433747	0,433747
Reduction exposure to toxicity	0,072627	2	3	1	3	2	0,145253	0,21788	0,072627	0,21788	0,145253
Land use	0,056597	2	0	0	0	0	0,113193	0	0	0	0
Endangered species/ animal welfare	0	0	0	0	0	1	0	0	0	0	0
Total Score ENVIRONMENT	1						2,69	2,40	1,47	1,82	1,68
Country Rank							1	2	5	3	4

ECONOMIC	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Employment generation	0	2	3	3	3	3	0	0	0	0	0
Trade effects	0,179885	2	1	1	2	3	0,35977	0,179885	0,179885	0,35977	0,539654
Business creation & value chain	0	3	3	3	3	3	0	0	0	0	0
Financial self-sufficiency	0,266359	3	3	3	2	1	0,799077	0,799077	0,799077	0,532718	0,266359
Consumption patterns	0	3	3	3	3	3	0	0	0	0	0
Savings on maintenance costs	0,209628	2	0	0	0	1	0,419257	0	0	0	0,209628
Higher residual values	0,079686	1	2	1	0	0	0,079686	0,159371	0,079686	0	0
Increase in investments in tech	0,190294	3	3	3	3	1	0,570883	0,570883	0,570883	0,570883	0,190294
Fiscal effects	0,074148	0	0	0	0	0	0	0	0	0	0
Total Score ECONOMIC	1						2,228672	1,709216	1,629531	1,463371	1,205936
Country Rank							1	2	3	4	5

SOCIAL	Wj	Scores DfBM	DfSA	DfDRM	DfWMR	DfL	Weighted Scores (RS) DfBM	DfSA	DfDRM	DfWMR	DfL
Stakeholder participation	0,081824	2	3	3	3	3	0,163649	0,245473	0,245473	0,245473	0,245473
Community engagement	0,082178	1	1	1	1	2	0,082178	0,082178	0,082178	0,082178	0,164357
Preservation of cultural heritage	0,081824	0	0	0	0	1	0	0	0	0	0,081824
Development of social capital	0,096348	2	2	2	2	1	0,192695	0,192695	0,192695	0,192695	0,096348
Regional inequality	0,243389	3	2	2	3	0	0,730166	0,486777	0,486777	0,730166	0
Formation of human capital	0,170913	2	2	2	1	0	0,341827	0,341827	0,341827	0,170913	0
Demographic transition	0	0	0	0	0	0	0	0	0	0	0
Social cohesion	0,161699	2	1	0	0	1	0,323398	0,161699	0	0	0,161699
Social inclusion	0	0	0	0	0	0	0	0	0	0	0
Child, migrant labor, human trafficking	0	0	0	0	0	0	0	0	0	0	0
Indigenous/local peoples	0	0	0	0	0	0	0	0	0	0	0
Human rights/ Fair labor conditions	0,081824	0	0	0	1	0	0	0	0	0,081824	0
Total Score SOCIAL	1						1,833913	1,51065	1,348951	1,50325	0,749701
Country Rank							1	2	4	3	5

SUMMARY	DfBM	DfSA	DfDRM	DfWMR	DfL
Average Rank	1	2,00	4,00	3,33	4,67
FINAL RANKING	1	2	4	3	5