174 Fashion Stores as potential educators of conscious consumers. 2 case studies: H&M Group and Inditex

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Abstract

The fashion industry is considered one of the most polluting, due in part to the huge use of raw materials and water in their processes, and the GHG emissions. Fashion brands are aware, and they are working to transform the industry towards a more sustainable one. In recent years, this industry has launched some initiatives to commit themselves (with other international organizations), to mitigate climate change (UN Fashion Charter for Climate Action) or positively contribute to preserve biodiversity, oceans, and climate (The Fashion Pact). In terms of product, brands are also launching so-called sustainable collections and giving information to their consumers about the materials, processes, and manufacturers, in an effort to reach and show full traceability. Although the progress is far from the objectives, the sustainability strategy is clear in most of them, and accessible for the consumers, both in terms of information and goals. But fashion brands are also retailers, with a specific weight in the built environment through their stores. The building sector is also one of the key seven product value chains identified by the New Circular Economy Action Plan as relevant, with a high potential for increasing material efficiency and reducing climate impacts. The brands have included their stores in their strategy to reduce GHG emissions and have plans to improve their energy efficiency. The retail store, the space where fashion and architecture meet, could be a good showroom of the sustainable and circular practices of the brands, both in terms of products and buildings, but this potential seems to be ignored by now. In a moment of rethinking the physical stores because of the Covid 19 pandemic and the growth of online markets, we wonder if the fashion stores could play an important role in educating consumers towards a more sustainable behaviour. This study addresses the issue through the analysis of the two biggest mass-market European fashion players: Inditex and H&M. Inditex had 7,469 stores in 2019, while H&M had 5,076. Inditex's strategy is based on circularity and digitalization; H&M strategy is based on three pillars: leading the change, circular and climate positive, and fair and equal. Both groups are committed to the UN Sustainable

Development Goals, have circularity as an essential axis, and have special collections (Join Life and Conscious) of more sustainable materials. Based on the information disclosed by the brands on their Annual Reports and their websites, we have analysed the actions they are doing in their stores to commit to sustainability and circularity, and we have compared the results for the two groups. The results show that these brands do not use all the potential of their stores as a channel to communicate their commitment to sustainability.

Keywords: fashion stores, sustainable fashion, conscious consumer, Green Deal, Fashion Pact

Introduction

Sustainability is one of the main issues in the fashion agenda, as it is considered one of the most polluting industries: due in part to the huge use of raw materials and water in their processes (this sector occupies the fourth position in materials pressure), and it is the fifth in Greenhouse gas (GHG) emissions (EEA, 19). Fashion brands are aware, and they are working to transform the industry towards a more sustainable one. In recent years, this industry has launched some initiatives to commit themselves (with other international organizations), to mitigate climate change (UN Fashion Charter for Climate Action) or positively contribute to preserve biodiversity, oceans, and climate (The Fashion Pact).

In terms of product, brands are also launching so-called sustainable collections and giving information to their consumers about the materials, processes, and manufacturers, in an effort to reach and show full traceability. Although the progress is far from the objectives, the sustainability strategy is clear in most of them, and accessible for the consumers, both in terms of information and goals.

But fashion brands are also retailers, with a specific weight in the built environment through their stores. The building sector is also one of the key seven product value chains identified by the New Circular Economy Action Plan (European Commission, 2020) as relevant, with a high potential for increasing material efficiency and reducing climate impacts. Some brands have included their stores in their strategy to reduce GHG emissions and have plans to improve their energy efficiency or even to commit to circular design practices. The retail store, the space where fashion and architecture meet, could be a good showroom of the sustainable and circular practices of the brands, both in terms of products and buildings.

In a moment of rethinking the physical stores because of the Covid 19 pandemic and the growth of online markets, we wonder if the fashion stores could serve as a means to educate fashion consumers towards a more sustainable behaviour.

A lot of research has been done about fashion sustainability, fashion retail, stores, but it is scarce the academic literature addressing the sustainability aspects of the fashion store design, and even more in terms of the potential of the stores to communicate this commitment to their customers. The research question was: "Can the fashion stores play an important role in educating consumers towards a more sustainable consumption pattern?"

This study tends to fill this gap, through the analysis of the information displayed by the two biggest mass-market European fashion players: Inditex and H&M, both with thousands of physical stores all over the world.

The paper is organised as follows: after the Introduction, there is a section with the Theoretical background of sustainability in fashion, architecture and sustainability, and the fashion retail store; it is followed by the Methodology where the case studies are presented; the Results and discussion; and the final section with the Conclusions, limitations and further research.

Theoretical background

Sustainability and fashion

Sustainability might be a buzzword, but is a really serious concept if we go back to this definition in 1987, by the Brundtland Commission, as the "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (WCED and Brundtland, 1987). Even more, if we consider the triple bottom line of Elkington (1998), that considers furthermore, equally economic and social aspects.

The concern about sustainability emerged even before this definition, as the first United Nations Conference on the Human Environment in Stockholm, Sweden, in 1972 tackled the environmental issue in the context of both, the human wellbeing and the human responsibilities: "Man is both. creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. (…) A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental policies" (1973)

Sustainable fashion, in words of Wei and Jung (2017), refers to fashion products that contribute to creating a sustainable future without sacrificing or at least harming the environment and society in the process of production and consumption.

The fashion industry has been first reacting to social and environmental campaigns devoted by NGO and organisations demanding better practices (Fashion Revolution, Greenpeace, ZDHC, etc.), and it is currently driving the change in big coalitions involving all the agents: industry (fashion brands, textile companies, logistics and transport companies, retailers, other providers), educators, organisations, etc. The

most recent significant milestones are The Fashion Industry Charter for Climate Action, signed in Katowice in December 2018, during the UN Climate Change Conference (COP24); the UN Alliance for Sustainable Fashion, created in March 2019 within the context of the UN Environment Assembly in Nairobi; and the Fashion Pact, presented in August 2019 within the context of the G7 Summit in Biarritz.

While the two first are driven by the United Nations, the third was born as a mission from the French President Emmanuel Macron to the Chairman and CEO of the luxury group Kering, François-Henri Pinault, to lead the change of the industry from inside the industry. As of April 2021, 71 fashion groups, representing one third of the turnover of that industry, have signed the Pact, that is focused on biodiversity, climate change and oceans.

The Fashion Industry Charter for Climate Action's main objective is to drive the fashion industry to net zero GHG emissions by no later to 2050, through a commitment on sixteen actions. To cite only a few: to reduce 30 percent aggregate GHG emissions in scope 1, 2 and 3 by 2030 against a baseline of no earlier than 2015; to prioritize materials with low-climate impact without affecting negatively other sustainability aspects; to pursue energy efficiency and renewable energy in the value chain; and to establish a closer dialogue with consumers to increase awareness about the GHG emissions caused in the use and end-of-life phases of products.

Scope 1 are all direct GHG emissions from sources owned and controlled by a company; Scope 2, indirect GHG emissions from the generation of electricity, heat and steam purchased by a company; and Scope 3, other indirect emissions (outside the direct control of the entity, such as from a company's value chain activities).

Its first Progress Report released in June 2021 highlights the achieving: it has been signed by 125 companies and 41 supporting organizations, representing $450 billion in revenue. In the first year, 60% of the signatories achieved a reduction in GHG emissions (annual saving of 3.48 million tonnes of CO_2 equivalent and $117.14 million savings from emission reduction), and 72% are publicly reporting to the CDP (Carbon Disclosure Project) platform to track and report the progress of climate commitments. They are organized in seven Working Groups. The Working Group Decarbonization Pathway has settled the frame to report and control these emissions. Regarding to raw materials, they have a first commitment to increase from 14 to 45% the global percentage of recycled polyester used by 2025. The Working Group of Brand, Retailer Owned or Operated Emissions has agreed on focusing primarily on switching to renewable energy under Scopes 1 and 2, mapping out existing energy efficiency initiatives; developing a collection of best practices from leading brands and retailers; and providing guiding for renewable energy sourcing practices, among others (in this first year, only an average of 33% of total power purchased comes from renewable sources; and only 7% responding signatories' total consumption is sourced from renewable energy) (UNFCCA, 2021).

If we go to the Fashion Pact, its first progress report was published in October 2020. The signatories have set 7 tangible targets for climate, biodiversity and oceans (the three pillars of the pact). Related to climate, the first is the implementation of the principles of the UN Fashion Charter, followed by achieving 25% low-impact materials sourcing by 2025, and 50% renewable energy by 2025 and 100% by 2030% in their operations. The results show reductions of 350,000-450,000 tonnes of CO_2 equivalent (only 10% of the global number recorded by the UN Fashion Charter, but it was recorded nine months before, and the signatories are not exactly the same). If we go to the energy from renewable sources, signatories of the Fashion Pact source 40-45% from renewable energy. Regarding to biodiversity and oceans we highlight supporting zero deforestation by 2025, and the elimination of unnecessary packaging in B2C by 2025 and B2B by 2030.

Apart from these big institutional frameworks, researchers have devoted attention to sustainability in the fashion industry. Some have tackled the social aspects, focusing on the reporting and the corporate social responsibility (Ferri, 2017, García-Huguet, 2021, Joy et al., 2012; Köksal et al., 2018; Marques et al., 2020; Perry, 2012). Others have analysed the impacts of the raw materials and innovative processes (Mihaleva, 2020; Rex et al., 2019;), or the role that designers play currently in sustainability (Karell and Niinimäki, 2020; Regadera et al., 2020).

It is also reported the gap between intentions and sustainable purchasing of consumers (Blázquez et al., 2020; Friedrich, 2021; Ozdamar and Atik, 2015). Some state that the fast fashion model cannot be sustainable by the model itself (Arrigo, 2017; Henninger et al., 2016; Kim and Oh, 2020). On the contrary, the big main retailer groups of fast fashion are triggering the shift towards a more sustainable value chain. And this sentence, that Arrigo, E. (2017) applies to luxury brands, would be suitable either for fast fashion: when a brand is marked by social and environmental responsibility, this contributes to enhancing the customer relationship, since customers are proud of buying products from a sustainable company.

Architecture and sustainability

The building sector is one of the critical industries to fight against climate change. In ten years, buildings have passed to be responsible for 40% to 50% of energy consumption in Europe, according to the European Parliament (2010), and the European Commission (2019b). Moreover, they are responsible for 50% of extracted materials, 33% of water consumption and 33% of waste generation.

This directive settled the objective of by 2020 all the new buildings in Europe were Nearly Zero Energy Building. It has not been achieved. However, those buildings built after 2000, consume (in average), half of those of 80s (European Parliament, 2010).

In 2019, two milestones drafted the panorama about architecture and sustainability in Europe: the European Green Deal and Level(s).

The European Green Deal (European Commission, 2019a) is a roadmap for making the EU's economy sustainable, with actions to boost the efficient use of resources by moving to a clean, circular economy and stop climate change. Although it covers all sectors of the economy, seven key value chains have been identified as critical, including building and textiles.

Level(s) is the European framework for sustainable buildings. It provides a common language for assessing and reporting on the sustainability performance of buildings (European Commission, 2019b). It is based on six macro-objectives that address key sustainability aspects over the building life cycle: GHG emissions; resource efficiency and circular material life cycles; efficient use of water resources; healthy and comfortable spaces; adaption and resilience to climate change; and optimized life cycle cost and value.

Although it seems to be very useful as it is open access, well-structured and complete, it is not applied by practitioners and architects, nor there is published academic research yet. To have a common framework to measure sustainability in buildings would be paramount, as there is no tool now, except some private certifications like LEED and BREEAM.

The fashion retail store.

The fashion retail spaces are the point when architecture and fashion meet, and where might be transmitted the sustainable values of the brands. They are usually located in streets with high patronage and reach directly many people. Some academics have assimilated the store as a marketing communication tool (Clow and Baack, 2010; Kent, 2003), while Arrigo (2017) has researched on how flagship stores of luxury fashion brands disseminate externally their corporate sustainability.

"Buildings [...] habitually frequented by the city's inhabitants, such as those in retail spaces [...] are capable of raising awareness of environmentally friendly consumption and practices. ...] should be encouraged to disseminate information on energy efficiency to the public by prominently displaying energy performance certificates, particularly in buildings of a certain size [...] that are frequently visited by the public, such as stores and shopping centers "(European Parliament, 2010).

This message has been, unfortunately, ignored both for the retailers and the brands, although some of them display the LEED for Retail or BREEAM certificates on their facades, showing their efficiency.

Apart from the energy efficiency, other possible sustainable actions related to the stores have been forgotten, despite the number of responses to a circular value system that have emerged in established fashion firms. These commitments are not often shown in the environmental management of their physical stores, the final link with the consumer. According to the Report Pulse of the Fashion Industry (Global Fashion

Agenda, 2018), there were major advances for sustainability in most of the value chains comprising the textile industry -notably in product design and development, and in the management of its end of use- except in the retail sector, which has barely experienced improvements compared to 2017 activity. However, the retail space makes up, together with packaging and transport, only 15%; which justifies firms and organizations to focus their efforts on the other fields that generate greater negative impacts (GFA, 2018).

This does not imply that the sustainability potential of retail spaces might be forgotten. In fact, the big retailers (as the ones of our study, Inditex and H&M), have special plans for their stores, as they are the definitive environment for the product and brand message, in addition to the link and connection with the consumer, an important agent for the transition towards the Circular Economy.

The lack of circularity-oriented tools for the physical spaces makes difficult to compare performance or criteria of the stores. However, they are strongly relevant in terms of reduction of GHG emissions (Scopes 1 and 2) and energy renewable sourced, some of the goals of the aforementioned commitments, both UN Fashion Industry for Climate Action and the Fashion Pact.

To help brands to commit to circularity, we developed a guide for circularity in stores, taking in consideration the one proposed by Jaca et al, (2019) for small and medium enterprises. Then, we have compared the information disclosed by the two groups, H&M and Inditex, with our guide, in order to identify the items that they have developed yet and the potential areas of improvement.

Methodology

This paper builds on qualitative data, based on secondary material: existing literature and documents disclosed by the groups of our case studies.

There are three steps: the review of the existing literature, the case studies H&M and Inditex, based of the information disclosed by them, and the comparison of their information with our previously developed guide for circularity in stores (Valerio, 2020), following the five fields of action of circular economy (take, make, distribute, use, and recover / enrich) and the guide proposed by Jaca et al. (2019) for small and medium businesses.

Our guide aims to be a support for both big and small retail shops, and ca be applied to other fields of architecture.

To review the literature, we have selected the documents in Scopus, with two keywords: "fashion" and "store". The search until July 2021 shows 124 documents. If we refine the search using the keywords "retail store" and "fashion", the documents reduce by a half, as they are 55. When we have tried to add a more architectural vision with the third keyword "design", there are 4 documents. If we add the sustainability

dimension with other keywords, like "circular design", the result is 0 documents, or 1 document if the third keyword is "circular economy", or 2 if the keyword is "sustainability". If we refine the search incorporating the "conscious consumer" as the third keyword after "fashion" and "retail store", the result is again 0.

As the academic literature is scarce and there is not a solid theoretical frame, we have decided to use case studies, Case study methodology is recommended for compensating the lack of established theory or when the research builds mainly on secondary data.

The fashion groups selected for the study are Inditex, a Spanish group, and H&M, Group a Swedish one. Both of them are owners of several fast fashion brands. Inditex has in its portfolio Zara, the most well-known, Pull&Bear, Bershka, Zara Home, Stradivarius, Massimo Dutti, Oysho, Uterqüe. H&M has H&M, COS, &Other Stories, H&M Home, ARKET, Weekday, Afound, Monki, and Sellpy.

Our brands operate using one type of store format: "single-brand specialty store". Although each group has several brands, they do not use the format of "multi-brand store". We use single brand according to the sense given by Miao (2019): "single-brand specialty store" as a fashion retail store which carries a single brand and operates with the intention of building the single brand.

The company chosen are well recognized by their influence in the fashion world and by their commitment to sustainability: both were founding signatories of the UN Fashion for Climate Action and the Fashion Pact, and many others. We have summarised some in Table 1.

Table 1. Some data about our groups in terms of volume and sustainability

	Inditex	H&M
Number of employees*	176,611	126,376
Revenue (USD), 2019*	31.3 billion	24.3 billion
Activity	textiles & clothing manufacturing	retail
Number of stores 2019	7,469	5,076
Headquarters	Arteixo (Spain)	Stockholm (Sweden)
Number of brands	8	8**
Sustainabel Apparel Coalition	Yes	Yes
Dow Jones Sustainability Index (S&P Yearbook 2020)	Gold (67)	Gold (68)
Carbon Disclosure Project	Yes	Yes
Make Fashion Circular (Ellen MacArthur Foundation)	YES Core partner	YES Core partner
CEO Water Mandate	YES (s. 2011)	YES (s. 2008)

Corporate Knigts' Annual Ranking Most Sustainable Corporations 2020	94th	27th

*Data from Orbis Database, 2019

**In this case, we do not consider Sellpy as a brand, but a way of delivery.

The data collected was based on secondary sources. Regarding to the groups, we have specifically used public information available on internet: Annual Report 2019 (Inditex, 2020), H&M Annual Report 2019 (H&M 2020a), H&M Group Sustainability Performance Report 2019 (H&M 2020b), and on their webpages.

Case study: Inditex

Their Sustainability Roadmap is founded on two cornerstones (Inditex, 2020:76):

-A commitment to the circular economy and decarbonisation

-Fully adhering to the Sustainable Development Goals and aligning their strategy with the United Nations 2030 Agenda and ultimately, to the promotion and respect of human rights.

They have core policies and strategies steering their sustainability actions, that include "Inditex's Environmental Sustainability Policy, Global Management Strategy, Global Energy Strategy, not to mention their manual for the design, construction, management and evaluation of Ecoefficient stores.

The circular economy approach has resulted in three initiatives: Closing the Loop, Zero Waste, and Green to Pack.

Closing the Loop is the plan to extend the useful life of textile products by collecting, recusing and recycling them. In 2019, the program was already implemented at 1,206 Zara stores in 46 markets (Inditex, 2020:179). The main uses of these garments are donation, upcycling in new textiles (not much developed); downcycling to non-textiles industry (mostly building sector); sale at second-hand stores, and energy recovery (we understand that by incineration) without exceeding 5% of the total garments).

Related to Zero Waste, their commitment is that none of the waste generated by their activities in their offices, logistics, and stores ends up in a landfill (Inditex, 2020:180). It is directly tackled by logistics, packaging, packing, the "single hanger" initiative, and training to the employees to recover the waste.

Green to Pack is their programme to improve their packaging using recycled materials and eliminating plastic bags in stores.

Going to the buildings, their plan for decarbonisation and circularity is focused on energy and water, through five actions: global energy consumption, major commitment to renewable energies, reduction of GHG emissions, energy management, and water management (Inditex, 2020:160).

Their commitment is to achieve 80% of consumption form renewable sources in their facilities by 2025, and in 2019 they had achieved 63% of electricity. The reduction of GHG emissions of Scopes 1 and 2 was of 35% per m2 emissions (Inditex, 2020:164-165).

They have an efficient plan of energy management at logistics centres, own factories and store, through which have reduced 2% the consumption of electric energy per m2 in comparison with 2018 (Inditex, 2019: 166); and 6% per m2 in stores (Inditex, 2019: 170). In 2019 they had 5,891 eco-efficient stores (92.7% of the group), and in 2020 they have reached 100%.

In 2019 they had 40 owned stores certified under the sustainable construction standards: 29 LEED Gold, 10 LEED Platinum and 1 Breeam. They have nearly all the brands (except Stradivarius), and in 17 countries: 21 Zara stores, 3 Pull&Bear, 4 Massimo Dutti, 2 Bershka, 5 Oysho, 4 Zara Home, and 1 Uterqüe (Inditex, 2020:171).

Case study: H&M

Their strategy on sustainability is based on three pillars: Circular & Climate Positive, Leading the Change, and Fair and Equal (website).

In 2019, they have monitored 10.1% reduction in electricity since 2012, 96% renewable energy in their own operations, 13% of water recycled, 67% of facilities in own operations with water efficient equipment, 29,005 Tonnes of garments collected through garment collecting initiative in 2019, and 62% of stores with recycling systems for main types of store waste. (H&M, 2020b:26).

According to their Priority 1 related to circular & climate positive: energy efficiency, they want to be leaders in energy efficiency and use as little energy as possible across their entire value chain. The majority of H&M Group's own electricity consumption happens in their stores, and they are working to reduce store electricity intensity, including improving heating, ventilation, air conditioning, HVAC, and lighting systems (H&M, 2020b:31).

On their webpage, they have published in 2021 some stories about sustainability, being one of them about circularity in architecture: Built with circularity -form storefronts to office floors, that perfectly explains what we pretend with this article, to show how the sustainable practices that a brand is carrying out can be shown at the retail space.

H&M Group's Circular Innovation Lab is working in new more sustainable materials and processes. They created interior panels made from textile fibres and dust, that have been used as interior in H&M stores, as well as in a pop-up concept for COS, saving 3,198 kg of fabric waste. They are also testing biocement as a floor in one office in Sweden, made of waste aggregate and microorganism mixed with water. They are also working with the Ellen MacArthur Foundation and with Arup to address circular business not only in their core business but also in their built environments. They want

to optimise resources used in the group's stores and offices, by reusing interior and construction materials.

At the stores' level, there are two examples: & Other Stories prolonged the life of their mannequins, and Monki used recycled yoghurt pots in their window interiors.

Results and Discussion

We have analysed the 124 documents indexed in Scopus with the keywords "fashion" and "retail".
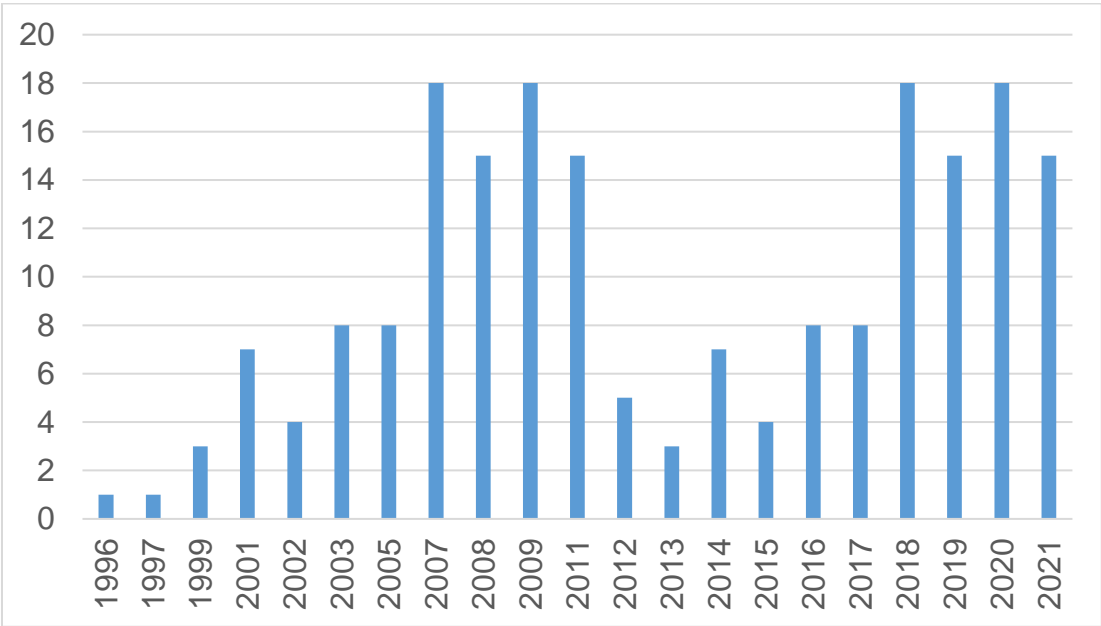
Figure 1: Number of indexed documents per year

We observe in Table 1, as there have been some peaks in the production around 2007-2011, and from 2018 on, coincident with the major economic crisis. It might be because of the need of rethinking how to improve the retail activities in those moments.

If we go to the areas covered by these documents, we observe in Table 2, that the majority of studies come from business, management. Although there are some from engineering, almost all refer to technologies such as RFID or other systems to improve stockage. One studies the energy efficiency of the stores, analysing the Inditex stores and how the managers well informed can improve the performance of HVAC system by reducing the gap of indoor and outdoor temperature (Loureiro and Labandeira, 2019).

Table 2: Subject area of the documents indexed

Subject Area	%
Business, Management and Accounting	33.8
Engineering	14.3
Computer Science	9.1
Social Sciences	9.1

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Economics, Econometrics and Finance	8.2
Materials Science	6.1
Decision Science	5.6
Arts and Humanities	3.9
Mathematics	2.6
Environmental Science	2.2
Other	5.2

We have observed that there are no documents (using those keywords), addressing the challenges due to Covid or closed stores during 2020. There is only directly related to architecture, but in terms of regeneration of malls or commercial buildings (Dunham-Jones and Williamson, 2017). It might be because some architecture journals are not indexed in Scopus. Chan et al., (2012), Haug and Münster (2015), Khoa et al. (2020) and Miao (2019), refer to some aspects of design (atmosphere, formats, variables, attributes) that more influence the purchase. Arrigo (2017, 2018) explore the sustainability issues that could be communicated by the luxury brands in their stores, applying one to the Kering case.

Chan (2012) states that It is not enough for fashion companies to manufacture fashion clothing in an ethical production system and develop and design fashion clothing with sustainable and recyclable materials: They must also improve store-related attributes of eco-fashion to better satisfy fashion consumer needs, and should be cautious in the direct and moderating effect of price premium level of eco-fashion when determining the price. This study, however, takes into consideration store design and store's environmental practices, always form the point of view of purchasing decision.

After the revision of the literature, we have applied our guide for circular design to the information given by the groups of our case studies in their disclosed documents. We observe in Table 3, that both of them comply with most of the items that should be taken in consideration when trying to apply circular design criteria to the buildings.

So, the guidelines and priorities established by the groups regarding to circularity, have good expressions in their stores. However, when we go to the brands webpages, only COS (from H&M group) has some information about the circularity of their stores, in their magazine.

COS is the acronym for Collection of Style. Its objective is to deliver quality design at a reasonable price. Its General Manager, Marie Honda, states that the brand "is strongly influenced by architecture and design". The guiding principles of the brand are: timeless, modern, functional and tactile. Everything is designed until the minimum detail: garments, interiors, graphics, packaging, to achieve high quality of performance.

Since its launching in 2007, COS has currently retail-stores in 47 countries, in extremely selected locations. Although each space is unique, all of them follow three

main concepts in design, from the Pentagram Partner Emeriti, architect William Russell: first, to obtain an open space, like "rooms inside a room", without fixed walls, using metal rails or runners; second, the space is like a white paper so as to the product can speak on its own, but when it is needed, it is possible to use some materials (like concrete, metal or warm wood to create a more agreeable atmosphere) to enhance the product; in third place, to preserve as much as possible the original features of the building and to take advantage of the maximum natural lighting, while creating a modern and friendly space.

Table 3: Circular design guide applied to the strategies of the groups

Circular design guide for retail stores					INDITEX	H&M
Value	TAKE		1	Materials origin	1	1
			2	Environmentally friendly extraction processes	1	1
			3	Ease and abundance of materials selected	1	1
			4	Toxic-free use	1	0
			5	Material life cycle (resistance, long life performance)	1	1
Effectiveness	MAKE		6	Design according to the characteristics of the material	0	1
			7	Optimization of the material	1	1
			8	Minimum transformation processes	1	0
			9	Reduction of unnecessary variety of materials	1	1
			10	Avoidance of hazardous or harmful chemicals	1	0
			11	Minimize waste when avoidance is not possible	1	1
			12	Modularity and standardization	0	0
			13	Inter-company organization of production tools (sharing machinery and equipment)	1	1
Optimization	DISTRIBUTE		14	Work with local materials (Km 0 when possible)	1	1
			15	Transport by the most sustainable means and routes	0	1
			16	Elimination of unnecessary packaging, or use it recyclable, biodegradable or reusable	1	1
			17	Easy transportation of the products (dissasembled to occupy less space)	0	0
Efficiency	USE / CONSUME		18	Maximum life cycle	1	1
			19	Ease and economic use/maintenance/cleaning guidelines	1	1
			20	Universal design, adaptability	1	0
			21	Easy of repair	1	1
			22	Easy disassemby of parts	0	0
			23	Minimise the need for external energy, in the pursuit of energy self-efficiency	1	1
			24	Minimal waste generation during use	1	1
			25	Alternatives to ownership of the products /retail space: rentals, pop-up, services.	0	1
Resilience	RECOVER / ENRICH		26	Adaptability and flexibility (direct re-use)	0	1
			27	Repair and restoration for re-use	1	0
			28	Use of its components as components of new products	0	1
			29	Easy separation of its components without damaging	1	0
			30	Recycling of its components through low environmental impact processes	1	1

COS applies the same sustainable principles both to its garments and its physical stores. The interior design department usually works with innovative materials and processes to reduce waste and minimize environmental impact.

COS is a good example of best practices in circularity of the stores.

COS Cloche D'OR Luxembourg: Designed by the COS architecture team in London, in 2019. Located: Centre commercial Cloche D'Or, in the centre. It is the heart of a new district in town. The interior façade is made of Stone Cycling bricks, form mushrooms waste. It means a total of 8,960 kg of waste recovered

COS Banhofstrasse, Zurich (Switzerland): Designed by the COS architectural team. Located: Ancient bank in a building of 1920, 3 stories, 812 m2. Rehabilitation project: integral preservation of the characteristics of the existing elements: exterior façade, marble floor, terracotta facing of the pillars, etc.

COS Gwanggyo Gallery, Suwon (South Korea): Designed by architect Woojai Lee in 2020. Material. Bricks made out of recycled newspapers with glue, with an appearance similar to marble surface, paper texture and stone structure.

COS Tallinn (Estonia) Designed by the COS architectural team, led by head of interior Delphine Gautier in 2021. Located: A part-demolished industrial building of 19th Century: a former bread making factory in Rotermann Quarter. Working with the local historic committee in Tallinn, the architects preserved the materiality and highlighted the spaces within the building, designing a store to bridge the gap between the old structures, existing layout and its original purpose. Material: Existing limestone walls of the building, and an entire shopfitting reused from a previous COS store: to the concrete to the rail systems and cash desks. By refurbishing and reinstalling in Tallinn, COS saved 10,358 kg of waste from going to landfill.

This is a decisive step to circularity of the brand. As COS say in their Magazine, "The reuse test was an immense success for us. It allowed us to verify a process of repurposing materials on a global scale and identify the challenges in doing so. Going forward, we are now confident we can make our next store openings even more sustainable to help us achieve our goal of 100% circularity" (2021a).

But even if COS does so many things in the field of architecture, exploring its webpage, there is no reference to it in its Sustainability section: there is a lot about materials, about reduction of packaging, and about social issues. COS (2021b).

Conclusions

In this analysis, we have seen that the groups Inditex and H&M are coherent in their strategies addressed to the stores with the principles of the circular economy, as stated in our guide. In the case of COS, moreover, the stores are showing excellent practices in circular design, and the group communicates them as a corporative asset. We miss

this information on the website of the brand, that is more oriented to consumers and purchasing.

From this research, we observe that the planned actions about the sustainability of the store are more focused on corporative level than on consumers. There is no public information in the stores about the main issues, or the materials or the policies implemented; nor information disclosed on the brands' websites (that are the most used by consumers).

The answer to the research hypothesis "can the fashion stores play an important role in educating consumers towards a more sustainable consumption pattern?" would be yes, but not now. The stores have values of sustainability, but they are not currently used by the brands as a mean of communication with their consumers. The information about these practices has to be found on the corporative documents, or in architecture forums (both of them not usually consulted by consumers).

This exploratory paper would serve to these two groups to engage with their consumers through the sustainable values of their stores, improve the conversation with them and help creating a more sustainable behaviour on them

Limitations

This is an exploratory research based on secondary material. It would be necessary to test the findings with the consumers in an experimental study.

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