London Technology Club

Future Technology Series: The Future Technology in Fashion

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Foreword on the
Future Technology Series: Fashion

> “Technology is blurring the lines between fashion, function and fulfilment."

Anyone who knows me knows I love apparel and footwear. It seems many others do too: the industry is set to become a $3.3 trillion market by 2030…

I am very grateful to the fashion industry with regards to my own path and am a firm believer in fashion as a platform for social change. Firstly, dressing is an integral part of being human, it can be a positive creative expression of the ‘self’. Secondly for companies, corporate social responsibility is, quite rightly so, now a must in modern day business. Companies are expected now to give back. Lastly as a collective, there is an urgent global need for a responsible fashion industry. Wearing an item of clothing that provides a function, fashion, and a sense of fulfilment through knowing it is sustainable and giving back is hopefully in the future, the norm. Thanks to technology we are starting to expect ethics at the heart of decision-making throughout the industry – from supply chains to consumer choice. Technology is helping spread this message as well as provide evidence for those doing things right, and importantly, those doing wrong.

In an industry that constantly reinvents in terms of trends, styles and collections, due to the recent pandemic and shifts in consumer demands, the fashion industry as a whole has needed to reinvent itself. The shifts in how we create, distribute, display, buy and share fashion have been dramatic. I believe this is a seminal moment, a real chance for the industry to make real and lasting positive change, with technology as the key enabler. This report shows just how embedded technology can be in fashion- from regenerative and circular systems, sustainable design and fabrics, to virtual shopping, payments, storytelling and media. We (consumers, suppliers, brands and retailers) must continue to harness technology as the power to continue to positively collaborate and transform is now available to us all.

As always, I enjoy collaborating with LTC and its members. Here’s to another successful technology report by the Club and its community.

Natalia Vodianova
Supermodel and Philanthropist

About the
London Technology Club

The London Technology Club is an exclusive community of family offices, private and institutional investors, venture capital firms, technology experts and pioneers. The club combines co-investment opportunities, education and relationship-building opportunities in the tech sector under one umbrella and provides access to competitive VC funds with attractive returns.

We organise events with leading technology visionaries, entrepreneurs and investors. A number of prominent international investors are members of our Advisory Board, such as June Felix, CEO of IG Group; Chris Rust, GP of Clear Ventures and ex-partner at Sequoia Capital; and Jim Mellon, the British entrepreneur, investor and philanthropist.

Future Technology in Fashion is the tenth report in our Future Technology reports series, adding to those published throughout 2019 and 2020, on subjects ranging from Longevity, Art and Nutrition to Property, Space and Finance. All of these are available to download, in full, on the LTC website.

Fashion is one of the largest industries in the global economy, estimated at $2.5 trillion.[1]

From designing new clothing lines to delivering new customer experiences, fashion thrives on innovation. In recent years, there have been major shifts in technology, cultural and social norms—and fashion has reflected this in its ever-changing cycle of trends. Technology is influencing all aspects of fashion, from the design

1 McKinsey & Company

process to the moment the customer receives the desired item. The industry will see huge amounts of innovation in the coming years, driven by new technology and evolving customer expectations. What are the key trends to expect?

The push for sustainability

Sustainability is becoming a crucial trend across various sectors. Conscious consumers are embracing the growing movement of 'slow fashion' which focuses on more sustainable and environmentally-friendly materials and ethical production and distribution methods. These values are particularly important among younger shoppers who will continue to shape the future of the fashion industry.[2] The use of recycled materials, rental platforms and shopping for pre-owned items are also on the rise.

Going digital

The pandemic has accelerated the move towards everything digital, and this trend is likely to continue. Technology will be essential - from AI and machine learning to analyse customer data, improve search and address sizing issues, to augmented reality, 3D visualisation and chatbots for a more engaging customer experience.

Multi-brand e-commerce platforms will become increasingly popular and social media channels will likely continue to play an important role in marketing.

Augmented physical shopping and omnichannel

As a result of more sophisticated tools deployed in e-commerce, physical shops would also need to provide a more compelling user experience. Shopping malls and boutiques will become places where entertainment plays a bigger role, augmented reality facilitates quick and more exciting browsing and try-ons, and check-out is fast and contactless.

Fashion and tech collaborations

The above trends will bring greater collaboration between fashion brands, retailers and technology companies. E-commerce platforms, payment solutions, virtual fashion and augmented reality enablers will play an increasingly important role in the fashion business.

As the fashion industry evolves, technology can help create a more sustainable, innovative and customer-centric fashion ecosystem.

2 CB Insights

Maria Pavlinova
London Technology Club
Membership and Marketing Director

Contents

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01 The Vision Summary

"With rapid advances in technology, post-pandemic adjustments and changing customer demands, the industry will see huge amounts of innovation in the coming years."

A Future Day in the Life of a Fashionista

Written by Maria Pavlinova, London Technology Club

In our humble opinion, this could easily be a typical day for a fashionista of the very near future...

I work for a leading online luxury fashion retail platform. Beautiful, sustainable and cutting-edge clothes are not just my passion – I need to look the part.

Over morning coffee, my personal digital assistant (PDA) suggests outfits for the day. My digital stylist has access to my data and can recommend outfits based on my past preferences, my calendar plans – even the weather. Each time I purchase or rent an outfit, it goes into my digital wardrobe app, so I have an easy overview of all of my outfits. I can look at them on my mobile or, for a more immersive experience, by putting on a virtual reality headset.

This morning, I am on a panel discussing sustainability in fashion. Despite great progress in the last decade, there is still lots more to be done. I choose a power dress by Stella McCartney made from recycled materials. It has temperature control so I can feel comfortable both indoors and outdoors. And it fits like a glove, thanks to 3D body scanning technology. I take my favourite bag, made from lab-grown leather. I like the feel and durability of real leather, and lab-grown leather means I don't have to compromise on animal welfare. And I can't forget my indispensable digital assistant – my elegant smart watch, which doubles as a mini-computer and health tracker and connects to my other devices.

I do nearly all of my shopping online these days. With augmented reality, virtual try-on technologies and smart recommendation engines, this is a fun and easy way to shop. When I see an outfit I like in a virtual fashion show, I simply click a button to buy or rent it – the next day, a drone delivers the outfit to my door. My PDA keeps track of my sizing, fit and payment information, as well as my special preferences.

Shoes are my final frontier – I like to try them on in a real shop to test the comfort. On my way to work in a driverless car, I drop by a store that sells shoes developed by a former SpaceX employee. Designed using high-tech engineering, these shoes promise the seemingly impossible – high heels with sneaker-like comfort. I preselected several when browsing the shop's website. The shop assistant scans my mobile phone and brings out the selected shoes. They look and feel great. So I buy two pairs. After a quick contactless checkout, I am in my office just a few minutes later.

At the office, I check out the progress of our photoshoot with digital models. Avatars are a quick and cost-effective way to present new outfits. Many have their own social media following, so are just as 'influential' as real-life models from the past. Using multiple screens, we can change the background, the setting and the time of day, as well as the model's posture, makeup and hair style based on the brand's desired look.

In the afternoon, I have a virtual meeting with an avant-garde fashion label (famous for its virtual outfits for gaming and real outfits for sci-fi movies). I decide to use one of my digital outfits. It looks quite futuristic, which fits the conversation, although I wouldn't wear something like that in real life. Digital clothes are really handy for such occasions.

At the end of the day, I prepare to attend a reception hosted by a large fashion conglomerate. I need something unique and extravagant. For this occasion, I have a 3D-printed dress that was created exactly to my measurements and with my creative input. I pair it with a trendy designer bag rented for the week on a sharing platform. Such platforms are very much in vogue – they allow users to rotate outfits and accessories without generating excessive costs and waste.

The next morning, I arrive in Milan for business meetings. My wardrobe is in my suite waiting for me, all items ironed and hung up neatly in my closet. Before leaving home, I used the DUFL app to send my wardrobe to my destination ahead of my arrival. Being able to travel baggage-free saves a lot of time and stress.

I look forward to browsing Milan's shopping arcades after work. They offer the perfect mix of atmospheric shopping with the advantages of modern technology – from scanners on entry with personalised recommendations, to 'magic mirrors' for trying on clothes, to fast checkouts. Despite the convenience of online shopping, we humans will always enjoy the tactile experience of a real-life, physical store.

A Macro Look

Fashion is defined as "an aesthetic expression, at a particular period and place and in a specific context of clothing, footwear, lifestyle, accessories, makeup, hairstyle and body proportions".[3] Its everyday use implies a look defined by the fashion industry – the look of the moment. The fashion industry has seen spectacular growth in the early 21st century. It is valued at over $2.5 trillion and employs over 75 million people worldwide.[4]

Our focus, for the purposes of this report, is mostly on luxury fashion, characterised by high price points and outside the category of goods that are simply necessary for daily life. As you will see, there is a complex relationship between supply and demand in the fashion industry, reflecting the question of whether art imitates life or life imitates art. Fashion brands and suppliers respond to changes in consumer demands, and also impact their tastes and desires, thus creating demand.

2020 was a particularly pivotal year for the fashion industry. The pandemic hit the industry hard, with almost three quarters of listed companies losing money.[5] But, while the crisis had a negative impact on many businesses and jobs, it also might have accelerated innovative processes, including the shift to all things digital. Many fashion companies have taken time during the crisis to reshape their business models, streamline their operations and sharpen their customer propositions. Companies with a strong digital proposition came out on top.

With rapid advances in technology, post-pandemic adjustments and changing customer demands, the industry will see huge amounts of innovation in the coming years. This report outlines the technology that will drive widespread change.

> **"The pandemic will accelerate trends that were in motion prior to the crisis, as shopping shifts to digital and consumers continue to champion fairness and social justice."**[6] - McKinsey & Company

3 Wikipedia
4 UNECE
5 McKinsey & Company
6 McKinsey & Company

02 The Supply of Fashion: Design and Manufacturing

"This push for sustainability will drive trends such as more efficient and on-demand manufacturing, waste reduction, the development of more environmentally friendly fabrics and use of reliable origin tracking methods."

The conscious consumer and investor

> ***"While the sustainability issues within fashion, and particularly fast fashion, are not new, what is new is how the industry's most influential customers are starting to respond."*** [11]
>
> CB Insights

The global apparel and footwear industry is estimated to become a $3.3 trillion market by 2030. The rising population, an emerging middle class and the 'fast fashion' culture are causing apparel consumption to soar (a projected increase of 63% through 2030).[7]

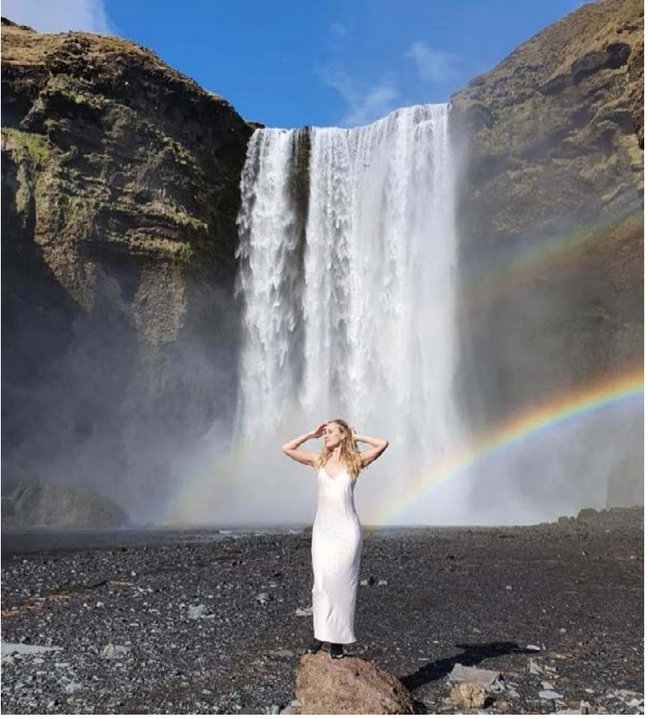
According to a study by McKinsey, clothing production doubled between 2000 and 2014, with the average consumer buying 60% more garments compared to 15 years ago. Yet, each clothing item is now kept for half as long.[8] Since the early 2000s, accelerated manufacturing and billions of dollars of marketing have normalised a culture of repeatedly buying, then disposing of, clothes to make room for the next trend.[9]

The mainstream clothing industry has truly entered the era of fast fashion. But along with fast fashion also came headlines exposing the industry as one of the greatest polluters – growth has come at a price. Nearly 20% of global wastewater is produced by the fashion industry. The sector is also responsible for 10% of global carbon emissions – more than airlines and ships combined.[10] Fast fashion is also linked to dangerous working conditions due to unsafe processes and hazardous substances used in production.

Today's conscious consumers are becoming increasingly aware of the negative environmental impact of fast fashion. And they're starting to show a preference for companies with a track record of more sustainable production and distribution methods. Nearly half of fast-fashion retailers have reported a recent decrease in customer purchases as consumers look to responsible brands to take a stand for the environment.[12]

This push for sustainability will drive trends such as more efficient and on-demand manufacturing, waste reduction, the development of more environmentally friendly fabrics and use of reliable origin tracking methods.

7 Barclays
8 McKinsey & Company
9 Barclays
10 UN Environment Programme
11 CB Insights
12 Paypal Newsroom



Technology will play a critical role in moving the fashion industry towards a more sustainable future. Aslaug Magnusdottir, fashion veteran and founder of sustainable fashion brand Katla, says it's important to tackle the following key areas:

Fabric innovation:
Significant innovation is leading to the development of new fabrics that are more environmentally and/or animal friendly. These include recycled fabrics, lab-grown leather, bio-degradable materials and organically produced materials.

Waste:
A tremendous amount of excess inventory – approximately 30–40% – is created each season. Technology can help reduce this in a variety of ways. First, improvements in manufacturing technology – including 3D knitting, on-demand printing and software to support on-demand manufacturing – can help increase the speed at which fashion items can be manufactured. This reduces the need for companies to take bets on big amounts of inventory. Second, the use of AI to more accurately predict future sales can play an important role in minimising excess inventory production. Third, high-quality 3D renderings of fashion items can minimise the need to make samples and ship them around the world for approval and photoshoots. Instead, the renderings can be used to test consumer interest in an item, or even pre-sell it, before it is put into production.

Transparency:
A variety of tracking systems, often supported by blockchain technology, are providing consumers with more transparency into the supply chains of the companies they buy from. This allows them to monitor the sustainability practices of these businesses and hold them accountable through their purchasing decisions.

The COVID-19 pandemic has negatively impacted the entire fashion industry supply chain, from cancelled orders to global store closures. Sustainability is likely to play a greater role in fashion brands' recovery plans in a post-pandemic world, with a particular focus on supply chain traceability, workers' rights and excess inventory.[13]

Fabric Innovation

> ***As much as the fashion industry is part of the problem, it needs to be part of the solution, and turn into a powerful force for positive change by following regenerative principles, a circular systems approach, and sustainable design.***[14]
>
> The Sustainable Angle: Future Fabrics

In the past, fibre technology was limited to specialist areas like sports or protective clothing – space suits, for example. Now, fashion brands are taking a growing interest in alternative fabrics, focusing on more sustainable substitutes and high-tech materials that offer both function and aesthetics. Novel fabrics, such as alternative leather and biodegradable and recycled textiles, are entering the market.

Brands like Stella McCartney have been at the forefront of sustainable and cruelty-free materials. Large fashion houses like LVMH and Kering have also made public commitments to substantial environmental targets. Achieving this means reducing the reliance on animal products to create fashion goods. Conventional leather manufacturing is environmentally devastating, but early vegan alternatives were also often petroleum-based and highly polluting.

VitroLabs, a portfolio company of LTC member Agronomics, is a leading clean cellular-agriculture company that creates slaughter-free, environmentally friendly leather using stem cell technology. The company has a patented process for the tissue engineering of its leather hides, which retain the positive attributes of traditional leather, including the appearance, scent and durability. VitroLabs has made substantial technical and commercial progress over the past year, reaching significant milestones to achieve reduced production costs, consistent leather quality, increased platform production capacity and process efficiency.

Piñatex is a natural leather alternative made from the fibre from discarded pineapple leaves. It uses waste from pineapple plantations, with local factories separating the strands and felting them into a non-woven fabric that can be used for clothes, footwear and furniture. The company has attracted attention from H&M, Hugo Boss and Chanel, among others.[15]

A group of brands including Adidas, Stella McCartney and Lululemon has teamed up to invest in a novel material called Mylo – a mushroom-based leather alternative grown from mycelium by biotechnology company Bolt Threads.[16] The California-based startup is also innovating Microsilk – a super-strong and durable silk that replicates silk fibres produced by spiders.

Parley Ocean Plastic® is created from upcycled marine plastic waste collected from beaches and coastal communities. The waste is shredded and reworked to create high-performance polyester yarn that is then used to create Adidas x Parley sportswear. Each sneaker repurposes approximately 11 plastic bottles. The colour choices reflect the environments each product is aimed at protecting — seafoam blues, deep greens and a range of navy shades.

Experimental clothing brand Vollebak draws on innovations in technology to create sportswear of the future. Its Solar Charged Puffer is made from a highly responsive material that can be charged by any light source and made to glow in the dark. With three-layer waterproof fabric, ultra-durable detailing and insulation, the jacket can keep you warm down to -40°C. Vollebak's Plant and Algae T Shirt is made from pulped eucalyptus and algae grown in bioreactors. When you decide your T-shirt has reached the end of its life, you can simply bury it in your garden, where it will biodegrade within 12 weeks.

13 Barclays
14 The Sustainable Angle

15 The Business of Fashion
16 Dezeen

Wearable technology

> ***"In the future of work fashion, data is the new black. The clothes we wear to work will be sensor-embedded and connected, monitoring stress levels, reminding us of appointments, alerting us and others when there's important work to be done...."***
>
> Rebeccah Pailes-Friedman, author of "Smart Textiles for Designers: Inventing the Future of Fabrics"

Wearable technology – such as smart watches, fitness bands and wireless headphones – has been on the market for several years. These are mostly accessories, however. The next stage is to integrate wearable technology directly into clothing, footwear and jewellery in ways that combine comfort, style and function. Technology companies are realising the power of fashion and are seeking partnerships to change the way we view wearable technology.

The Levi's® Truker Jacket with Jacquard™ by Google – originally designed for urban cyclists – has a Jacquard sensor built into the sleeve that allows the wearer to wirelessly connect to their smartphone. Users can perform simple actions like taking calls, using navigation or changing music tracks without looking at their phone screen.

Bose Frames audio sunglasses connect to your smartphone and use Open Ear Audio™ technology to free you from headphones. There's also a microphone system built into the temples, making it easy to take calls on the go, hands free. Thanks to the angle of the speakers, you can hear high-quality sound while staying alert and aware of your surroundings.

UK tech startup Prevayl has developed wearable technology that is seamlessly integrated into garments without wires or plugs to receive bio-signals from the body. Its approach is focused on providing more accurate data about the human body's performance than wearable devices can.

Sensoria Fitness Socks® use advanced textile sensors paired with a connected anklet device. They not only deliver accurate step counting, speed, calories and distance tracking, but also track foot landing technique as you walk and run, which helps to identify injury-prone running styles.

Elite sport has become an environment to test and develop new technology for high performance. For example, during the 2018 Winter Olympics in PyeongChang, Ralph Lauren equipped the US Team with app-controlled, heated parkas. The water-repellent jackets are equipped with a slender battery pack with three heat settings and work for up to 11 hours at full charge, allowing athletes to stay comfortable, whatever the weather.

Nike Adapt sneakers use a breakthrough lacing system that electronically adjusts to the shape of your foot. With integrated LEDs, the shoes can alert a user of low battery or a tight fit, and everything is easily controlled from a smart phone.

Meanwhile, brands like Swarovski, Michael Kors and Kate Spade are realising the potential of 'smart jewellery'. With added features for fitness tracking, notifications and stress management, the next generation of earrings, necklaces, bracelets and rings is set to be highly connected.[17]

17 Wareable

For women, Bellabeat's wellness monitor keeps track of your activity, sleep, monthly cycle and stress sensitivity, while doubling as a jewellery piece that can be worn as a bracelet, necklace or clip. Oura is a smart ring that tracks everything from activity levels to sleep patterns. It combines advanced sensor technology with a mobile app to deliver personalised health insights from body measurements. Oura features sleek designs, ranging from simpler silver rings to more upscale diamond-studded and yellow gold editions. But the rings aren't designed just for fashion. They can detect the onset of illnesses and alert users – a blurring of the line between fashion and health function.

18 More Dash
19 CB Insights
20 Vogue Business

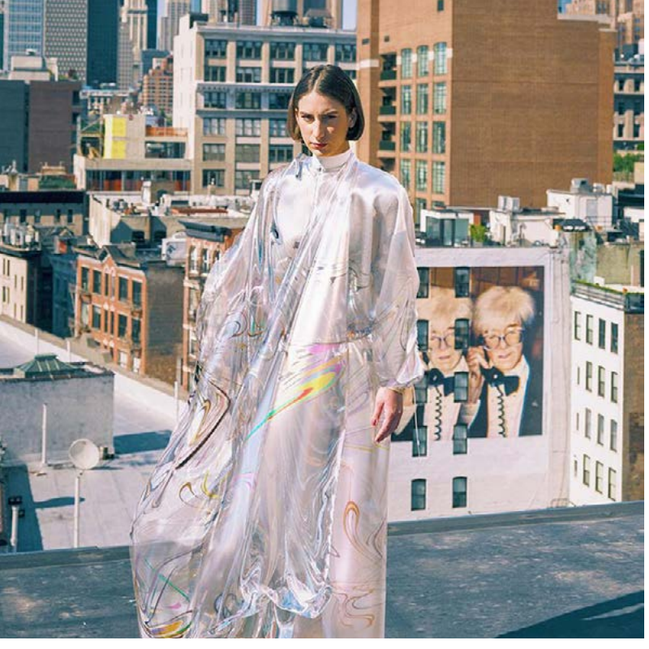
Digital fashion

> ***"Digital fashion is the new fast fashion. If we really want it fast, it should be digital."***[18]
>
> Daria Shapovalova, Founder of More Dash

Over the past decade, the sale of virtual goods has exploded alongside the growth of gaming and social media. The result is a multi-billion dollar marketplace for products that exist only in the virtual realm. According to CB Insights' Industry Analyst Consensus, virtual goods are a $190 billion market.[19] As we spend an increasing amount of time online – whether on social media or in Zoom meetings – the idea of a digital wardrobe might no longer seem so far-fetched.

Digital clothes are 3D-rendered garments that can be dressed on a digital avatar or overlayed on an image of a person. Because they offer constant new looks for social media feeds without the need to buy physical clothes, some argue they may be a more sustainable alternative to fast fashion.[20]

Scandinavian retail brand Carlings was one of the pioneers of virtual fashion. Its first digital streetwear collection in 2018 sold out quickly and was a hit on social media.



In 2019, the Dutch digital fashion house The Fabricant made headlines for selling a virtual dress for $9,500 through the Ethereum blockchain. The Iridescent Dress was designed by creative director Amber Jae Slooten to be fitted onto a photo of the owner. While the dress might not exist in the real world, it has real value thanks to its existence on the blockchain, making it an investment in an intangible good.

In recent months, platforms like XR Couture, The Dematerialised and Dress-X have launched as places for designers to sell and customers to buy digital-only designs. The concept is still new, but some see an opportunity to be "the Farfetch of digital fashion".[21]

How does it work? When customers buy a 3D digital design on a platform (prices generally range from $15 to $200), they also submit a photo. Digital tailors 'dress' the photo and email the image back to the customer. The Dress-X platform features items from purely digital fashion houses as well as those from traditional fashion brands that have created digital versions of their designs.

Luxury brands have experimented with digital fashion – mainly through in-game assets and promotions that tie into a physical product. According to Fast Company, 2.5 billion people around the world play video games, and that figure keeps growing. The average gamer is 33 years old and upper middle class, which aligns nicely with luxury brands' target demographic.[22]

In 2019, Louis Vuitton released a League of Legends collection, while Moschino debuted a collection inspired by the popular Sims online game. Gucci has created athletic wear for a popular tennis game and partnered with Fnatic to create a limited edition $1,620 watch.

Gucci was also among the first to collaborate with Drest – a luxury styling game launched in 2019 by Lucy Yeomans, former editor-in-chief of Harper's Bazaar UK. With the Drest app, users can dress photo-realistic avatars in styling challenges, then buy physical versions of the clothes on Farfetch. Looks are graded both by algorithms and playing peers: higher scores mean rewards – in-game payments to buy more virtual clothes and access to additional features. Drest has partnered with over 200 luxury brands including Gucci, Bottega Veneta, Loewe and Stella McCartney.[23]

21 Vogue Business
22 Fast Company
23 Forbes

Through Drest you can also donate to charities – such as supermodel Natalia Vodianova's platform Elbi. "Drest is not just what you wear—it's what you stand for," says Yeomans. "We wanted to make something that showcases the best of fashion—the creativity, the philanthropy, the inclusivity."[24]

Sceptics say digital fashion lacks a use case outside of gaming and social media, but companies such as Dematerialised are building a bigger value proposition. Through authentication on a blockchain, 3D assets can be owned and used not only in static images but also in video games and virtual reality. And they can be collected and sold as digital art. With consumers spending more and more time in front of screens, there are more opportunities to sell them digital garments for virtual worlds.[25] And as more esports cross over into the mainstream, fashion brands will be ready to capitalise on publicity.

Blockchain and provenance tracking

Blockchain is mostly known as the record-keeping technology behind digital currencies. However, it has clear uses in the fashion industry.

The technology can help brands have more secure and transparent supply chains, tracking the journey of a product through a clear and solid audit trail, and giving every product a unique digital ID. The digital IDs can be tracked using RFID tags, QR codes or NFC tags. In turn, this can help build public confidence about brands' ecological and ethical claims and help consumers make more informed purchasing choices.[26]

24 Vogue
25 Vogue Business
26 Positive Luxury
27 Positive Luxury

Blockchain company Provenance provides software to help brands bring transparency to the sourcing and impact behind their products. It does this by tracking the supply chain journey, from raw materials through to the finished product. Brands and retailers can use Provenance to engage consumers at the point of sale and substantiate product claims with verifiable data.

Katla, a US-based sustainable fashion brand with Icelandic roots, has a tracking tool that provides transparency into the manufacturers of its garments and the fabrics they use. A label on each garment includes a unique tracking number that can be entered into the company's website to reveal the origins of the item.

Yoox Net-a-Porter group is piloting digital ID technology across all its private-label collections through a partnership with Eon, which provides an Internet of Things (IoT) platform for fashion retailers. Digital IDs allow customers and partners to check a garment's authenticity, provenance and considerations for styling and care, so they can last longer. This encourages a circular economy mindset.

The Butterfly Mark by Positive Luxury is an industry-leading certification that identifies luxury brands that meet the highest standards of verified innovation and environmental performance, offering transparency at points of sale and equipping consumers to make more informed purchasing decisions.

Brands certified with the Butterfly Mark can display it on their website and partner retailer sites, enabling individuals to click for a clear overview of the company's sustainable and ethical business practices.[27]

Using blockchain technology, manufacturers and designers can also protect their brands against counterfeiting. With blockchain technology, each item's origin and ownership can be tracked to its source. Counterfeit product or replicas will not have an authentic chain in the records and can thus be rooted out.

The world's largest luxury group LVMH has partnered with ConsenSys and Microsoft to launch AURA, a platform that offers product tracking and tracing services based on Ethereum blockchain technology. AURA makes it possible for consumers to access the product history and proof of authenticity of luxury goods – from raw materials to point of sale, all the way to the second-hand market.

High-end diamond brand DeBeers is leading industry efforts towards blockchain adoption to clear the supply chain of fakes and conflict minerals. A group of diamond manufacturers is working with DeBeers to develop Tracr, an open-source blockchain platform that is improving traceability across the diamond industry.[28]

Authenticating luxury products through blockchain technology is particularly important with the emergence of rental and resale platforms. Fashion rental and resale companies have rapidly expanded in recent years due to their promise to do 'more for less' and positively impact the environment. Authenticating luxury items is now more important than ever as consumers demand visibility into the lifecycle and legitimacy of products.[29]

While blockchain technology and other tracking tools are still in their early days, they present great opportunities for the fashion industry in terms of transparency, authenticity and engagement with customers.

28 Business of Fashion
29 Positive Luxury
30 Vogue Business

3D Design and printing

Digital 3D design allows brands to design items quickly and remotely. 3D assets – which are three-dimensional, photorealistic digital models of products – can be used in a number of ways, from creating marketing materials and virtual showrooms to e-commerce pages and augmented reality experiences.

The technology has been of interest to the fashion industry for some time, but especially so during the pandemic. Digital design uses software in place of paper and fabric, allowing designers to create and modify designs without having to physically produce them. Traditional sampling and prototyping can take three months, but 3D design can render a realistic-looking shirt in a day.[30]

CLO is a popular 3D fashion design software program that enables true-to-life garment visualisation for the fashion, film and gaming industries.

3D printing involves the production of a three-dimensional object from a CAD (computer-aided design) model or a digital 3D model. The use of 3D printing for prototyping and creating clothes is evolving. It was initially used to create complex, visually impressive designer pieces. The first 3D-printed garments were quite rigid and took a long time to produce but, with evolving technology, production times have decreased and designers are experimenting with 3D printing to develop collections of regular clothes.

Innovative Dutch designer Iris Van Herpen is one of the pioneers of 3D printing in fashion. Her 3D-printed dress, presented during the Haute Couture Paris Fashion Week in 2011, was named by Time Magazine as one of 50 best inventions of the year.[31]

3D printing has a number of advantages. On the creative side, it allows designers to produce complex shapes and patterns that are impossible to construct by hand. As 3D printers become better and more efficient, they allow designers to create prototypes more quickly and cheaply, as well as the production of customizable products. 3D printing also enables the integration of recycled materials into the manufacturing process and helps to reduce waste, as garments are printed on demand.[32]

Among the challenges are authenticity and copyright protection, as the CAD file can be easily copied. Also, very few printers and materials currently available have been designed with fashion products in mind, so there are some limitations on the hardware side.

3D printing also lends itself to shoes, handbags, jewellery and accessories.

Big players in the footwear industry have been developing solutions for mass customisation for years. Adidas and New Balance[33] have both started to 3D-print midsoles, while Nike is experimenting with 3D-printed 'uppers'.

In 2016, Boston-based brand Ministry of Supply introduced a jacket produced on a 3D robotic knitting machine. The blazer is seamless, wrinkle-proof and even sweat-wicking, and – due to 3D modelling – can be perfectly fitted to each individual.

Some companies are already offering 3D-printed products through online shops and configurators. Though 3D fashion printing is still in its early stages – and the idea of printing your clothes on a 3D printer at home seems quite far-fetched – the technology has the potential to expand in the future.

31 i.materalise.com
32 3D Insider
33 all3dp.com

03 The Demand for Fashion: Retail and Merchandising

“We have vaulted five years forward in consumer and business adoption of digital in a matter of months.”

Digital Transformations

The past decade has seen a major shift to all things digital. The pandemic has further accelerated this trend.

According to the Report on The State of Fashion 2021 by McKinsey and The Business of Fashion: “Over a period of just eight months, e-commerce’s share of fashion sales nearly doubled from 16% to 29% globally. Indeed, recent data shows that we have vaulted five years forward in consumer and business adoption of digital in a matter of months.”[34]

As this digital shift continues, shoppers will demand ever-more sophisticated digital interactions, and fashion players must develop more engaging experiences to encourage consumers to connect.

Customer experience futurist Blake Morgan notes that, to be successful, brands and retailers of the future “won’t just make their clothing available online – they will also create an immersive digital shopping experience with things like virtual fit or sizing tools, virtual showrooms and virtual stylists. Fashion brands will also leverage technology like AR and VR to allow consumers to digitally ‘try on’ items from the comfort of their own homes.”[35]

Vogue Business innovation editor Maghan McDowell notes another trend: video shopping. This offers the interactivity of in-person shopping, while giving access to global customers. Tech platforms – including Instagram, Amazon, YouTube, Shopify, Snapchat and multiple software startups – provide video shopping for companies like Gucci, Farfetch and Moda Operandi.[36] According to Nicky Rettke, product director for YouTube Ads, 70% of YouTube viewers made a purchase from a brand as a result of seeing it on the platform.[37] The development of 5G wireless technology will enable much faster downloads with higher-definition graphics.

Social media and influencer marketing will continue to play an important role and will likely become more diverse, as dominant platforms like Instagram offer new ways to engage, and new platforms emerge – from TikTok, the fast growing video-sharing app, to Clubhouse, the new audio-chat social networking app.

The likes of TikTok are challenging the classical fashion cycle of fashion weeks and exclusivity of fashion shows. TikTok has created its own Fashion Month with nonstop fashion content posted by brands and creators, providing a streamlined fashion experience for users.

Talking to Vogue, CeCe Vu, fashion and beauty partnerships lead at TikTok, says: “Over the course of last year, we’ve seen an influx of interest and engagement from the community for fashion content. There is a lot more benefit to really being inclusive and inviting the audience into the experience. Brands are definitely branching out and leaning in toward the TikTok communities more. That also becomes a thing with fashion shows: they need to be interactive.”[38]

34 McKinsey
35 Forbes
36 Vogue Business
37 Vogue Business
38 Vogue

With the rise of e-commerce, we also see the rise of marketplaces, such as Octer, a department store based on online matching. The platform instantly compares thousands of brands and shows users the nearest matches. The platform not only aims to find you the perfect products at the right price, but also helps you discover products from stores you perhaps wouldn't have considered before. Founded by Henry Whittaker and Grant Slatter, the company's early-stage funding came in May 2014 via Seedrs. It broke the record for $1 million raised in 24 hours from more than 250 investors, and then reached 100% of another funding target in 2015.[39]

Online shopping and luxury brands

> **"The luxury market was once the preserve of well-heeled and well-established brands. Not anymore. Now, new brands and old are competing in the same digital space and trying to forge long-term relationships with the new luxury consumer."**[40] - Scalefast.com

Mainstream fast-fashion brands have had contrasting experiences: Primark had to close 305 of its 389 global stores, including all 190 in the UK. It had no other channels to fall back on. In contrast, fashion retailers Asos and Boohoo saw sales rise by 40% in the last four months of 2020.[41]

Luxury brands have been slower to adopt e-commerce strategies – perhaps because, until recently, customers were more reluctant to buy big-ticket items online. However, the pandemic forced reluctant luxury fashion brands to go digital and compete against the likes of Farfetch and Yoox Net-A-Porter luxury online retailers.

The pandemic had a devastating impact on bricks-and-mortar shops. As shops and factories closed and fashion weeks were cancelled or hosted online, offline sales have fallen by double digits. Numerous retailers, luxury and high street alike – including Barneys New York, Neiman Marcus, Lord & Taylor, Brooks Brothers, TopShop, J Crew, Oasis, Debenhams and True Religion - have either filed for bankruptcy or are struggling to survive.[42]

Brands had no choice but to quickly scale up their digital offerings, realising that they were in an adapt-or-die situation. According to research by Bain & Company, spending on personal luxury goods dropped by 23% in 2020, throwing the industry back to 2014 levels. At the same time, the share of purchases made online nearly doubled from 12% in 2019 to 23% in 2020.[43]

In November 2020, Alibaba Group Holding and Swiss luxury conglomerate Richemont invested $1.1 billion (£820 million) in online luxury fashion retailer Farfetch and its new Chinese marketplace to drive sales in the booming Asian market.[44]

LVMH – with labels such as Berluti, Dior, Fendi and Loro Piana – named Louis Vuitton vice president Michael David its first 'chief omnichannel officer'. He is expected to speed up the integration of all LVMH brands onto a single global technology platform.[45] German luxury e-commerce platform Mytheresa filed to float in the US, while the Kering conglomerate – which includes Gucci, Saint Laurent and Bottega Veneta – has seen its e-commerce revenue more than double year-on-year. The market value of Farfetch has quadrupled in 2020 to reach $18.6 billion.[46]

Even before the pandemic, consumers – especially younger generations – were showing an increased willingness to purchase luxury items online. And that trend is likely to continue in the future.

39 Seedrs
40 Scalefast
41 BBC News
42 Wired
43 Bain
44 Reuters
45 Wired
46 Wired

Augmented and Virtual Reality

Both AR and VR, as well as 3D visualisation, are increasingly applied in a creative way in the fashion industry to enhance customer experience.

AUGMENTED ONLINE SHOPPING

Various tech platforms are integrating tools to enable the use of AR. Selfie filters introduced by Snapchat in 2015 familiarised users with the idea of interacting with virtual objects through their smartphone camera. Apple introduced an iPad Pro with a camera, enabling users to place AR content in the real world. Pinterest and YouTube added AR makeup try-ons, and Facebook and Instagram have begun rolling out AR-enabled ads and posts.[47]

Shopify, a global e-commerce platform for online stores, launched Shopify AR to help brands create personal and interactive AR experiences for customers, "transforming the smartphone camera into a window through which consumers can engage with interactive digital scenes in the physical world". Experiential e-commerce platform Obsess uses virtual and augmented reality to digitise retail stores and showrooms. Obsess has created virtual store experiences for leading retailers such as Coach, Charlotte Tilbury, Diesel and Tommy Hilfiger. The startup now has $3.4 million in funding, and brands are expressing growing interest in experiential virtual retail during the pandemic.[48]

Burberry recently launched a new AR shopping tool that uses Google Search technology. It allows consumers to experience Burberry products embedded in the environment around them. By seeing an AR version of the product at scale against other real-life objects (e.g. a virtual bag next to a real dress) consumers can gain a better understanding of the product before purchasing it.

Charlotte Tilbury was one of the first companies to integrate AR to allow consumers to try make-up looks, and it has created a digital store experience incorporating VR. The online store allows users to browse through virtual 'rooms', try on products with an AR tool and watch tutorials for achieving the brand's signature make-up looks.

47 Vogue Business
48 Cision PRWeb

VIRTUAL TRY-ON

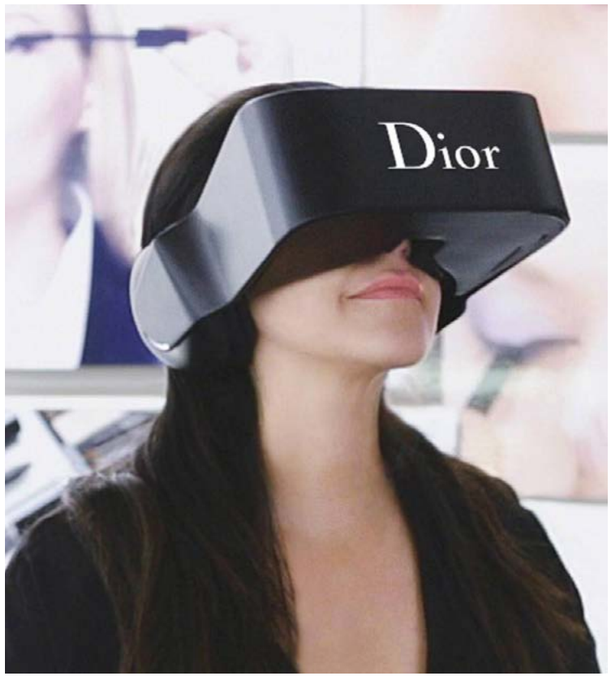
Virtual try-on technology allows brands to personalise the user experience, thus better meeting customer expectations and reducing the need for returns. The technology is still in its early stages. According to Wizz Selvey, former head of beauty at Selfridges: "Beauty is more advanced in this area but fashion is slightly harder to align to body shapes and fit. What will become really exciting is when virtual stores integrate augmented reality so you can try on clothes and make-up 'virtually'."[49]

French luxury brand Dior[50] has created a series of filters for Snapchat and Instagram for trying on accessories such as hats and sunglasses in AR.

British fashion boutique Browns has just launched its Virtual Try On for fine watches on the Browns Fashion mobile app. The app allows users to digitally try on various selected watches from the menu by pointing the camera at their wrist.

Wannaby, a startup that is building AR e-commerce experiences, has launched Wanna Kicks, an iOS app that enables customers to try on different pairs of sneakers from a range of 3D models. By choosing a pair online and pointing the camera at their feet, shoppers can see how the shoes look. The app even tracks foot movements, so customers can walk around while trying on a pair. The startup has collaborated with the likes of Gucci, Farfetch, Adidas, Puma and Reebok.

49 WIZZ&CO
50 L'officiel
51 McKinsey & Company



Artificial Intelligence

Artificial Intelligence can make retail cheaper, faster and more efficient. Increasingly, fashion brands and retailers are using AI and machine learning to maximise users' shopping experiences, improve the efficiency of sales systems and enhance the sales processes using predictive analytics and guided sales. Below are some examples of AI use cases in fashion retail:

LEVERAGING CUSTOMER DATA

With machine learning, retail and e-commerce companies can provide personalised product recommendations based on a customer's browsing and purchase history. According to a report by McKinsey, Amazon's proprietary AI-powered product recommendation engine is estimated to generate 35% of the company's revenue.[51]

AI can also help retailers assign more comprehensive descriptions to products, resulting in better product recommendations. It also significantly increases the speed, scale and complexity of items retailers can display. However, establishing these systems requires significant investment from retailers.[52] Recently launched startup The Yes aims to streamline and personalise the online shopping experience, providing technology to small and large fashion brands. The app uses algorithms to tailor style and shopping preferences based on simple 'yes' or 'no' answers. Founded by the former COO of Stitch Fix, it has already attracted $30 million in venture funding.[53]

Reflektion is award-winning predictive marketing software that uses AI to display relevant content and product recommendations in real time to improve customer engagement and conversion. The platform combines individual shopper insights and intelligent personalisation across marketing channels to deliver significant sales uplift. Intel Capital and LTC were among the investors in a $13.5 million round that took Reflektion's overall funding to more than $34 million.

IMAGE RECOGNITION

AI-supported visual search technology allows customers to search for products by uploading pictures of an item that caught their eye – in a magazine, on social media or on a person on the street. A visual search engine can find similar or identical items across a brand's catalogue.

Farfetch has partnered with Syte.ai – a visual AI technology company that powers visual searches for e-commerce players – to offer a 'See it, Snap it, Shop it' mobile app feature. The app lets shoppers upload pictures from anywhere to find a specific product or similar options. Users can select their own photos as well as Instagram and Pinterest posts.

CHATBOTS AND DIGITAL PERSONAL SHOPPERS

Advances in artificial intelligence and the increasing tendency for customers to shop on their mobiles have brought chatbots back into fashion. Some leading fashion and beauty brands like Burberry, Tommy Hilfiger, Sephora, Victoria's Secret and Estée Lauder are already using chatbots to interact with their customers. Retailers deploy bots to help shoppers discover and purchase products, while gathering valuable information for the brand. While personal recommendations still require more context, a bot can automatically feed in details such as sizes and purchase history, in addition to responding to simple customer requests related to pricing, colour and availability.[54]

52 Vogue Business
53 Tech Crunch
54 Vogue Business

In recent years, several personal digital styling services have emerged to help customers navigate their styling choices. Stitch Fix, a billion-dollar US fashion tech company, is on a mission to revolutionise shopping for the busy and over-stimulated customer. The company has developed an algorithm to help users curate their wardrobe. After a style quiz, the algorithm creates a style profile for your taste, fit and price range, and helps match you with the right human stylist, who curates a wardrobe to be sent to your home. Your purchase and returns history then feeds into future recommendations. Stitch Fix works with over 1,000 brands for different budgets.

LUKA is the brainchild of a team of technologists and fashion industry professionals in San Francisco with the mission of transforming the online shopping experience for men. The company identified a number of pain points for male shoppers and looked to technology to address them. LUKA makes it more satisfying and fun to shop on your phone. After a short onboarding quiz to understand parameters like budget, personal style and occasions, it provides ultra-personalised recommendations, led by the gap in the consumer's wardrobe – not by a salesperson or target.

SIZING TECH

Returns can be a major issue for retailers – generating high costs in terms of labour, shipping and potential problems with reselling. Returns also have high environmental costs – generating waste from packaging and pollution from shipping. Size-related returns are a particularly big problem for fashion e-tailers.

Companies are developing AI to improve fit accuracy for online shopping, however. Truefit, a Boston-based personalisation platform, provides an AI-powered data platform with size and fit recommendations to consumers based on their purchasing history. Truefit goes beyond sizing tech to become a broader data-driven platform: the data can also be used to provide analytics to enable retailers and brands to make smarter merchandising, marketing and manufacturing decisions. The company has raised $55 million in Series C funding and has more than 100 million registered users.[55]

Irish startup STYL.wrap is taking a comprehensive approach to sizing by looking at the whole supply chain. The data analysis from a customer's shopping history not only recommends products, but will also feed through to the factory and garment technologists, allowing brands with multiple factories to harmonise sizing across the range.

3D body scanning also has potential for addressing the sizing problem. Startup Unspun uses a 3D body scanner to generate virtual customer avatars made to produce custom-fit jeans. After being scanned, customers select the desired fabric, thread colour and style.

Although 3D scanning booths were piloted in stores such as Selfridges and Bloomingdale's back in 2011, the technology for mobile systems is still relatively new and might take a few years to reach a high level of accuracy.[56]

55 Tech Crunch
56 Verdict

The Sharing Economy

Technology has created platforms for new online marketplaces that have made sharing resources cheaper and easier than ever before. Netflix, Airbnb, Drover and Outdoorsy are all examples. Business models and brands providing usage over ownership are proliferating and fashion has been catching up.

Various resale, consignment and rental models have emerged, driven by consumers' concerns for sustainability, the desire for affordable luxury, and tech-enabled popularity, all accelerating the uptake of such services.

SECOND-HAND CLOTHING

The second-hand clothing market is expected to grow to $64 billion by 2028, according to CB Insights. Younger consumers are more likely to buy second-hand apparel for environmental reasons than any other age group.[57]

Resale platforms ThredUp and Poshmark have both filed for an IPO in 2021. While Poshmark has a marketplace that connects buyers and sellers of new and used apparel, ThredUp is an online consignment store that receives items from customers for resale through its website.

Companies like second-hand giant RealReal and Vestiaire Collective are leading the second-hand online fashion market for luxury and vintage clothes. Depop is a popular peer-to-peer social shopping app with more than 18 million users. The affordable clothing app with an interface that resembles Instagram is popular with younger shoppers. In 2020, it raised $62 million to fund US expansion and improvements in the app's functionality.[58]

Established retailers are catching on. Selfridges provides a platform for selling second-hand designer clothes, along with repair services and resale drop-off points in store. Farfetch is offering resale services for second-hand designer bags and clothes and facilitates clothing donations to charities.

With more consumers purchasing previously worn items, fashion brands will be looking to technology to create pieces with longevity that can last beyond a single owner.

57 CB Insights
58 Verdict

RENTAL SERVICES

Rental fashion is enjoying a boom as environmentally conscious and cash-savvy shoppers move away from high street fashion.

US-based Rent the Runway was one of the first online clothing rental services to provide designer clothes and accessory rentals for a monthly subscription fee. It carries apparel and accessories by more than 550 designer partners with options for work, weekends and special occasions. It has raised more than $200 million and counts over 8 million users.[59]

China's YCloset,[60] whose investors include Alibaba Group, uses a similar subscription rental model. The Beijing-based online platform has partnered with more than 100 fashion brands providing rental services throughout China. Similar online services include Onloan, Front Row and Cocoon.[61]

UK-based Hurr Collective is a designer fashion rental app that uses the peer-to-peer model. The platform allows fashion lovers to rent their clothing and accessories to other users in a secure environment. Mandatory peer reviews help members build their trust score. According to CEO Victoria Prew: "We're striving to bring sustainability to fashion... Our members are part of a collective of forward-thinking women that believe renting makes both economic and environmental sense." In 2019, the platform won the London Luxury Think Tank Sustainable Start-up Award, chosen by a jury including Caroline Rush, chief executive of the British Fashion Council, beating 17 other applicants.[62]

So far, the sharing economy has been slower to take off in retail compared to transportation or hospitality. Part of the reason is that the logistics of delivering clothing on a regular basis is more complex than renting a car or an accommodation for longer periods. Also, there might be psychological barriers to buying pre-owned clothes (less so with accessories). But if the fashion sharing economy flourishes, it will have a major effect on traditional retailers. Rent the Runway's CEO, Jennifer Hyman, predicts fast fashion businesses could be particularly affected as customers use rental services to borrow high-quality, on-trend seasonal pieces, rather than buying cheaper versions on the high street.[63]

59 Crunchbase
60 China Daily
61 Verdict
62 Fashion Network
63 Business of Fashion

04 The Experience of Fashion: where Supply and Demand Collide

"We are just touching the surface of what's possible in enhancing customer in-store experiences and digital is at the core."

Augmented Physical Retail

Despite all the advantages of online shopping, physical retail will not disappear. A recent study by Bain & Company confirms that 50% of fashion buyers value personal, face-to-face relationships with sales consultants.[64] But with brands' own online offerings getting better and better, physical stores are going to have to work much harder to attract consumers and will struggle to compete on convenience.

Omnichannel services will proliferate, and increasingly become a blend of digital and physical, whether by uniting a customer's purchase history or fulfilling an order through more than one channel.[65]

Augmented reality will make shopping more interactive and exciting. Stores become more attractive for the consumer when they are complemented by additional information that can be unlocked via an app, or by scanning a QR code with a smartphone. Many brands, from fast fashion giants like Zara, to high-end luxury brands like Chanel, have equipped their flagship boutiques with interactive technology. The use of virtual reality is also on the rise. In 2018, H&M[66] collaborated with luxury brand Moschino to stage a fashion show that took place entirely in a virtual space. Experts expect this practice to become the standard by 2025.[67]

Zara[68] uses augmented reality for its in-store displays. By holding their mobile phones in front of a select shop window, customers can see models wearing pieces from the latest line and click on certain items to automatically purchase them.[69]

Another promising use of AR in stores is interactive mirrors, where the customer can 'try on' clothes, footwear and make-up by clicking on items on an interactive screen. Although the technology is still at the prototype stage, it has huge potential for increased customer engagement.[70]

Intelligent Payment Systems

Nobody likes to wait in line, and customers used to one-click online retail experiences are likely to become especially impatient waiting to pay at the cashier counter. Moreover, the COVID-19 pandemic has raised customers' awareness of hygiene and contact issues. While it is hoped that the vaccine rollout will eventually alleviate these concerns, any contactless technology will likely be a bonus post-2020.

Intelligent payment systems make it possible for customers to purchase goods without interacting with a traditional checkout. This also reduces the threat of retail fraud.

A well-known AI application in retail payments is Amazon Go, a chain of convenience stores in the US operated by Amazon. The stores are partially automated, with customers able to purchase products using a self-checkout station.

64 Wired
65 Vogue Business
66 WWD
67 Medium
68 Forbes
69 AR Post
70 Medium

Companies like MasterCard are also seeking to transform traditional retail payments. Unveiled in 2020, its Shop Anywhere[71] touchless payment system allows shoppers to skip checkout lines by taking advantage of an autonomous checkout system.[72]

The next evolution is here: being able to shop from anywhere thanks to media, print, audio and video that allow consumers to purchase items via their mobile phones. Rezolve, founded by serial entrepreneur Dan Wagner, does just that. Rezolve's shoppable advertising technology can transform existing mobile applications by providing instant engagement capabilities. The Rezolve technology can also be used by merchants, brands, banks and telcos, enabling them to give customers instantaneous engagement opportunities, wherever they are.

Store-of-the-future concepts

It remains to be seen what is left of the traditional high street post-pandemic. Many retailers might shift to digital but also focus more heavily on lighthouse or flagship stores in major cities or markets. As such, many fashion-forward brands are still reimagining and experimenting with future store concepts.

In 2018, Farfetch launched its 'Store of the Future' in Thom Browne's flagship store in New York. The augmented retail concept envisions a personalised, integrated online and offline experience, with automatic customer recognition at the store's entrance, RFID-enabled clothing racks and digital mirrors that allow customers to choose sizes and colours and directly check out. The suite of technologies aims to improve retail productivity by capturing consumer data and enhancing interactions between consumers and sales associates, both in store and when the consumer interacts with the retailer or brand online.[73]

London's leading shopping mall Westfield released 'Destination 2028' – a vision for a shopping mall of the future, with "hyper-connected micro-cities, places where social interaction becomes central, communities are built and shopping is part of a wider experience, bringing the best in dining, entertainment and events. It integrates important consumer trends such as smart technologies and wellness in sustainable environments."

As Richard Horsey of Dise.com, a leading retail tech company founded in Sweden in 2003, notes: "We are just touching the surface of what's possible in enhancing customer in-store experiences and digital is at the core. Bricks-and-mortal stores will always be important and stores that get it right will thrive by allowing customers to experience brands first-hand. I think it's exciting as, although there might be fewer stores, those that remain will be better by offering a destination with a rich range of experiences."[74]

Dise is focused on using its intelligent technology software platform to connect online shopping with powerful in-person, in-store experiences. By using dynamic and interactive digital signage, it ensures that every customer receives a highly engaging and personalised experience. Automated triggers are based on who is in store and what the local conditions are. Dise's solutions include:

71 Masterclass
72 BRC
73 Farfetch
74 The URW 2018 Report

Connected Mannequins and Intelligent Changing Rooms:

These make use of RFID and magic mirror technology for everything from VIP experiences to allowing customers to adjust the lighting and music themselves.

Endless Aisle:

This allows customers to try in store but then personalise their purchases on interactive digital touchpoints for home delivery.

Digital Catwalk:

Using this, customers can point their smartphones to capture what a model is wearing.

According to Horsey: “Digital in-store should also set the mood whereby sound and lighting are key parts. Intelligent companies such as Cooledge use lighting to bring daylight indoors and Music in Brands curate bespoke music profiles which can be delivered on quality wireless speakers from Loud of Sweden. Finally, digital solutions will help retailers continuously improve by providing insights in a GDPR-compliant way.”

Focus on Burberry: From digital transformation to social retail

In 2006, Burberry had an identity crisis. New CEO Angela Ahrendts knew a reboot of the 100-plus-year-old company was required. Burberry declared it was to become, “the first fully digital luxury company”.[75] What followed was a digital transformation through large investments and multi-year efforts to consolidate its systems. Burberry embraced social media – in 2009, it was one of the first brands to join Facebook. It soon shifted the majority of its marketing budget to social platforms and digital media. This sounds like mainstream marketing strategy today, but at the time it was ground-breaking.[76] Over a decade later, its multichannel approach enabled it to minimise the impact of store closures during lockdowns. During the pandemic, Burberry used digital to make its stores available to customers via tools such as live chat, virtual appointments and virtual client events. As a result, online full-price sales grew by more than 50% in the third quarter of its financial year.[77]

75 Digiday
76 Digital Initiative
77 Internet Retailing

In 2020, it opened the doors of what it describes as “luxury’s first social retail store” in Shenzhen, China. The store’s aim represents an overall concept Burberry believes is the future: “Blend the physical and social worlds.” Burberry has been experimenting with CGI avatars, digital games and other campaigns, providing users with chances to win both virtual and physical rewards.

The store is designed for interaction, either in person or through social media. Access to the 10 rooms in the store provides variety for exploration. Burberry partnered with Tencent, owner of WeChat, to provide social retail elements. Shoppers are able to earn social currency as they explore the store, which unlocks exclusive content and personalised experiences. Each customer is given a digital animal character that develops as customers have increasing levels of engagement with in-store experiences.[78] The social store “marks a shift in how we engage with our customers”, says Burberry CEO Marco Gobbetti.[79]

The future for Burberry is a focus on a shopping revolution through integrating e-commerce, entertainment and even gaming into the consumer experience.

Last words

It is a tall order for fashion designers, fashion brands and retailers to continue thriving in such a competitive and technologically sophisticated environment. At the same time, the future is exciting, full of innovation, opportunities and solutions that are creative, sustainable and customer-centric. Farfetch CEO José Neves sums it up well when he says:

> **“Fashion is part of culture. It has been part of human culture for millennia. And people are going to continue to engage in culture, whether it’s fashion or music or art or literature. It’s essential for us as human beings."**

The other thing I would point out is the worst thing that can happen in any economy is a freezing up of consumption. If people stopped shopping for fashion, look at the shops that would be lost: the boutiques, the department stores, the designers, the factories. And at the end of the supply chain is a worker in India or Turkey. Consumption is not evil. Consumption is essential for the economy. Excessive consumption has its problems, like anything excessive in life.”[80]

78 Fashion United
79 Vogue Business
80 TIME

McCANN BESPOKE TAILORS ARTICLE

Written for London Technology Club about its digital transformation

We founded the business McCann Bespoke in early 2000. It immediately thrived as a London-based traditional bespoke tailoring company. Recently, however, we began to work with leading advisors such as Guy Hipwell (Harrods, Liberty, Thread etc.) and discovered the imminent opportunity or threat of technology and rapid evolution in buying preferences of Millennial and Gen-Z consumers. A six-month research project with Regents University London's Luxury Branding Faculty confirmed both opportunity and threat, and 'McCann Bespoke 2.0' was formed. Like so many other businesses, we've taken the COVID-19 pandemic as an additional opportunity to re-evaluate practices and it has accelerated market changes that were already in motion.

Using venture capital-backed startups as examples, primarily in the US, Canada and Australia ('Knot Standard', 'Indochino' and 'Institchu'), McCann Bespoke is now on a mission to create a leading British tailoring brand for the 21st century.

The current, self-funded strategy revolves around key supply- and demand-side innovations, all leveraging technology. Example pillars of our technology evolution include:

Low/No Stock, On-Demand Model

The first is to use tech innovation to facilitate a zero- or no-stock, on-demand, 'design-sell-make' model that is commercially and environmentally lean.

e-Sizing AI

With smartphone hardware, software and apps in the hands of most clients, precise sizing technology is within reach. While bespoke tailoring involves detailed interpretations of client sizes, 3D camera technology and body sizing AI is improving all the time to within around 98% of human tailoring accuracy. While many clients demand a personal hands-on experience, tech sizing will no doubt play a part in the convenience of top-up online ordering for clients and will appeal to digital natives who trust technology. The company is beginning to employ this technology both in-store to reduce error and online for convenience and to reach a wide audience.

Blockchain Supply/RFID

An updated order management system will provide the opportunity to develop blockchain supply chains to verify, supply and authenticate luxury garments. RFID will additionally allow transparency in supply and engagement with clients from order to delivery.

Augmented Reality and Rendering Style

McCann Bespoke is also building out detailed digital style books that can be rendered onto client models, offering a wide array of custom choice. This will create the opportunity to develop style specialists with a focus on a curated, highly personalised experience.

Environmentally Conscious Circular Business Models

Platforms such as luxury fashion Madalux Ventures-backed startup Reflaunt and Blu Ventures-backed LePrix offer the opportunity to extend the on-demand model into circular, reuse models. These models reinforce the sustainable mission and provide a powerful point of connection with a demographic that is increasingly environmentally aware.

Order Management Systems (OMS)

Creating a transparent and adaptable OMS allows the company to manage detailed client data and use flexible APIs to integrate into its supply chain with efficiency.

Startup tech platforms such as Octopus Ventures-backed UnMade are also working on technology to further advance this OMS model for scale, linking custom order management with custom production, driving the custom made-to-order model into the mainstream.

CRM

The above data-rich platforms integrate with CRM, allowing close proximity to clients with appointment booking and personal style updates to efficient social media and digital performance marketing strategies.

E-commerce

Drawing technologies together, the company hopes to create a true seamless, customer-centric, omnichannel e-commerce experience – as close to the in-store experience as possible – and move away from tradition and towards strategic leadership in the market.

IM and Online Style Advice

While technology platforms such as WhatsApp, Instagram, Snapchat and WeChat offer simple chat functions, these have been embraced by fashion startups such as Threads Styling, which is scaling customer-centric concepts with $20 million Series A backing from C Ventures. McCann Bespoke has successfully used such concepts to engage well, particularly with its younger demographic client base.

Experiential, Immersive Tech, Destination Stores

Extending the online experience in-store will create immersive technology, experiential destination stores in key locations that merge the traditional store experience with readily available client account data and style rendering onto digital 'style walls'.

The Future and Soft Robotics

The future is likely to exist in linking a technology-driven value chain of sophisticated digital marketing and next-generation social media, IM and in-store style guidance, using digital style and AI and custom ordering through OMS linked to sustainable transparent production.

Scale custom production is likely to be delivered via 'soft robot' providers such as Series B-backed Softwear Automation Inc or Rethink Robotics, backed by Bezos Expeditions. A plausible progression in this space would see robots working to detailed e-sizing orders delivered via blockchain to mimic hand cutting, stitching and garment creation.

While technology is likely to drive custom, on-demand clothing into the mainstream, McCann Bespoke is firmly targeted at the luxury, customer-centric market segments.

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