

# The impact of wearable technology in fashion Benefits and concerns



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# The impact of wearable technology in fashion

## Benefits and concerns

Reading time 8 mins

### Key Points

- Wearable technology is a growing trend in the fashion industry
- It has allowed designers to create personalised and functional products
- Virtual and augmented reality technology can change the way we shop for clothes, thereby increasing sales, reducing returns, and minimising waste
- However, using augmented reality in clothing still has a few wrinkles that need to be ironed out
- Wearable technology, especially temperature-adaptive clothing, has the potential to promote sustainability
- Concerns include privacy, security, and accessibility/affordability issues

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When we think about wearable technology, smart fabrics, and e-textiles, we often consider their applications in the health and fitness industries. While the fashion industry has been slower to catch up with the 'smart revolution', wearable technology in fashion is becoming less of a gimmick (e.g. clothing that lights up) and more of an enhancement that provides real value to the wearer. In this blog post, we'll look closer at the impact of wearable technology in fashion, including benefits such as personalisation and sustainability; and concerns around privacy and accessibility.

Over the past few years, wearable technology has become a growing trend in the fashion industry. Wearable technology integrates electronics and computer technology into clothing, accessories, and even implantable devices. The technology is designed to enhance our lives by making everyday activities more manageable and efficient. Read our previous article for some background on the meaningful [impact of wearables in clothing](#) (e.g. smart socks for runners and performance-tracking vests for athletes) and what makes this industry so exciting!

## The fashion industry's response to wearable technology



The fashion accessories industry has been quick to embrace wearable technology to bring new and innovative products to consumers.: it's being used to create a wide range of products, from

smartwatches and [smart jewellery](#) to fitness trackers and even clothing that can monitor our health and well-being.

For example, [Ford's prototype 'smart jacket'](#) for cyclists. The jacket has sleeves that light up when the cyclist turns (making them more visible to vehicles and pedestrians) and sensors to wirelessly connect to their smartphone's navigation app (the appropriate sleeve vibrates when they have to turn, reducing the need to consult a screen). The jacket also integrates flashing brake lights and has audio and haptic sensors to facilitate calls and repeat navigation assistance.

This is a prime example of how technology and fashion can have an aesthetic and functional appeal while solving problems for both the user and those they have to interact with in a public space (e.g. visibility on roads).

## The impact of wearables on fashion

The impact of wearable technology on the fashion industry has been profound. It has opened up new avenues for designers to explore: from designing fashionable and functional clothes to creating stylish and high-tech accessories.

One of the main advantages of wearable technology in the fashion industry is that it allows designers to create products that are personalised to the individual wearer. For example, a fitness tracker can monitor the wearer's physical activity levels, and the data can be used to create custom workout plans tailored to the individual's needs.

In addition, wearable technology could potentially change how we shop for clothes. With immersive technologies such as virtual reality (VR) and augmented reality (AR), shoppers can see what clothes would look like without ever leaving their homes. For example, the Haute Couture fashion brand [Dior uses augmented reality apps and filters](#) to allow customers to try on sunglasses, sneakers, and even makeup.

In theory, this technology allows consumers to try before they buy, which could help retailers increase sales, reduce the number of returns, and ultimately reduce waste.

That said, [augmented reality in clothing](#) still has a few wrinkles to iron out. While it certainly helps with visualising what something would look like, it doesn't help to determine what the fit, fabric, or comfort will feel like...

## Can wearables in fashion promote sustainability?

The integration of wearable technology into the fashion industry has also opened up new opportunities for sustainability. For example, clothing can now be designed to monitor the wearer's environment and adjust accordingly. [Temperature-adaptive clothing](#) (garments laced with strips that flatten and bend to help the wearer stay warm or cool down) reduces the need for additional layers of

clothing – and, ultimately, reduces the amount of clothing produced, consumed, and wasted.

Then there's the recent innovation of synthetic spider silk that combines [biomimicry, sustainability](#), fashion, and wearable technology – all in one!

- Japanese textile research company, [SPIBER, teamed up with North Face](#) to create an outdoor parka made from proprietary synthetic spider silk
- The 'Moon Parka' has a minimal carbon footprint
- Provides exceptional heat retention
- Spider silk, as well as the synthetic versions, are said to be stronger than steel and can be stretched 40% beyond its original length
- Synthetic silk textiles reduce the need for petroleum-based products, are biodegradable, and therefore better for the environment

## What are the concerns with wearable fashion technologies?

Despite the potential benefits of wearable technology in the fashion industry, there are also some concerns. One of the biggest challenges is privacy: wearables are, in essence, information and data-capturing devices. It is important to know who has access to this information and what they can do with it, as it can be used for various – and unwanted – purposes ( e.g. targeted advertising, employee productivity monitoring, health insurance assessment, and tracking people's whereabouts).

As a result, regulations need to protect consumers' privacy – especially regarding third-party access. In addition, device manufacturers also have the responsibility of ensuring security protocols are in place (e.g. with the software and sensors built into wearable devices) to prevent hacking.

Another concern is the potential for wearable technology to exacerbate the digital divide further. Wearable technology can be expensive, and not everyone can afford it. This can create a situation where only a select few can access wearable benefits while others are left in the cold.

## Ready to wear or back on the shelf?

On the one hand, wearables in fashion have opened up new opportunities for designers, provided new ways to personalise products, and have the potential to create a more sustainable future. However, while wearable fashion accessories such as smartwatches and jewellery have been easily and quickly adopted, it remains to be seen whether/when smart clothing – as well as VR and AR capabilities – will become accessible and useful enough to have more of a presence and a meaningful impact on the mass market.

Concerns around privacy and affordability will also need to be addressed as technology evolves. All industries, fashion included, are responsible for ensuring that wearable technology is used responsibly and ethically and that everyone has access to the benefits it provides.

What are your thoughts on wearables in fashion?

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