

Just Style

Features

How is technology transforming the fashion supply chain?

Just Style offers a deep dive into how technology has transformed the fashion supply chain and will continue to do so with the influence of AI and robotics in the near future.

Hannah Abdulla | April 17, 2025

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"As long as businesses have a clear approach on how to experiment, clear entry and exit criteria, clear use cases and expected outcomes, and a fixed time, there can only be positives in trying out new capabilities." Credit Shutterstock.

The constant evolution of technology has dramatically changed the way the fashion supply chain operates. Moving from manual processes to semi-automated ones and fully automated ones has driven efficiencies and improved sustainability.

But as technology becomes more sophisticated and we witness the mainstreaming of robotics, artificial intelligence and Gen AI, it does beg the question – how much tech is too much and what will be the wider impact on the future of the fashion supply chain and the people behind it over the next five to ten years?

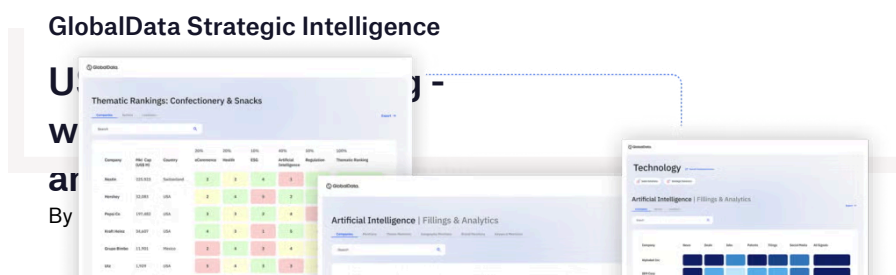
Embracing the AI revolution

It's crucial to note AI is not going away any time soon. It is being embraced more and more within the fashion supply chain as its benefits continue to be realised in everything from speed of prediction to sustainability.

In fact, it is the one technology that dominated discussions as fashion brands and manufacturers are keen to showcase how they are integrating the technology within their operations.

Lever Style's CEO William Tan explains: "By using data and AI technologies to automate, predict, and prescribe the actions needed in the fashion supply chain, we believe we can create a system that efficiently and effectively controls, facilitates, and troubleshoots the complex production flows between the 150 brand customers we serve and the 100 factories within our network."

The company's goal is to transform the entire pre-production stage (from order placement to production allocation) from being a series of unstandardised and human-driven processes into a system-driven coordinated flow.



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It recognises AI's capabilities in terms of using AI to reduce repetitive manual work, particularly data-entry related tasks. And it plans to expand AI usage to predict problems and solutions such as capacity and allocation optimisation.

Turkish garment manufacturer SunTekstil has introduced Refabric, a new AI-powered design platform set to integrate the long and complex processes of inspiration, research, trend analysis, design, prototyping, product development and marketing into a single platform ecosystem for fashion professionals.

“By optimising design processes, it reduces the need for physical samples and helps eliminate unpopular products beforehand, preventing a waste on time and resources. Designed as an AI fashion software, Refabric transforms ideas into designs within minutes and creates collections aligned with trends. It creates different designs by combining keywords, inspirational images, technical drawings and patterns, also by analysing global fashion trends, it develops collections that align with those trends,” says Sun Tekstil’s board chairperson Elvan Ünlütürk.

She explains AI is something SunTekstil has been slowly investing in since 2020.

“We only see this increasing at pace due to the improvements we are making across our whole supply chain.”

At present, she says, the technology is helping the company have more control over the direction and capabilities of any new platforms it works with to allow

a more personalised offering. And she believes there is an opportunity to increase traceability in the supply chain and boost sustainability improvements – specifically waste reduction and the lowering of carbon footprints.

For the vast majority of fashion manufacturers, the benefits of AI lie in driving efficiencies.

MAS Holdings chief digital officer Steve Dodd explains AI is being used by the company to provide product insights and design at all stages of the lifecycle.

What's the catch?

Like anything, there are risks associated with incorporating AI in fashion supply chains, concede the speakers.

One of those that has surfaced several times in conversations around AI in the industry is whether it will replace manual roles entirely. Another is whether the cost outweighs the benefit.

Dodd argues that as long as businesses have a clear approach on how to experiment, clear entry and exit criteria, clear use cases and expected outcomes, and a fixed time, there can only be positives in trying out new capabilities.

“It's important to experiment in the right way. We need to test the theory rapidly, prove there is a value that can be unlocked, then deploy at scale. Too often we see organisations experimenting for months, then failing to find a use case that can deliver a return, or even simply losing focus of what they were setting out to do.”

PDS Limited's Group CEO Sanjay Jain agrees, stating:

“Any new integration within an organisation comes with its set of challenges, from legacy system compatibility to workforce upskilling and data security. The rapid pace of technological evolution also brings risks, and without effective change management, organisations can struggle to adapt. Without a structured approach, resistance to change can lead to inefficiencies, disruptions, and missed opportunities.”

Meanwhile, Tan is of the view that AI allows Lever Style to differentiate quickly between what is a fad and what avenues are worth pursuing.

He shares: “Having clear and strong ideas of what we want technology to do for us also helps us navigate our innovation process better.”

What other technologies are fashion firms leveraging?

AI is having a real moment across the industry, however the fashion sector still relies on many tried and tested technologies.

PDS says it is exploring blockchain and IoT solutions to improve supply chain transparency and traceability.

It also leverages AP ERP, AI-driven analytics, and its proprietary digital collaboration platform, WEAVE (Web Enabled Application for Vendor Management), to enhance visibility and optimise operations across 22+ countries. Weave allows it to seamlessly share Purchase Orders (PO's) and Sales Orders (SO's) with its vendor.

“By integrating real-time analytics and automation, we augment agility, enable faster decision-making, and

ensure seamless coordination across sourcing, production, and logistics,” Jain says.

Sun Tekstil uses several pieces of technology from robotic process automation for its order systems and 3D for its fitting and pattern making.

When it comes to MAS, Dodd says the company leverages many “off the shelf platforms” and that its business is reliant on multiple technologies.

He explains: “It is critical in today’s world, to use technology that is best in class for the core functional areas of one’s business. As a manufacturer, that means using technologies that help to develop, plan and make products is absolutely key. The days of a single platform that can do everything is gone, now we need multiple tools with seamless integration to be efficient and agile as a business.”

One of the primary reasons companies engage technologies in their various forms is to boost efficiencies across the business.

How will tech impact the apparel sector in the near term?

Lever Style is working to position itself as an apparel production platform that matches apparel brands and orders to the most optimal producers in real time.

“With this platformisation, brands will benefit from unmatched production versatility and factory choices, while factories will tap into a wide range of brands and orders with minimal customer servicing cost and effort. Imagine a “ride-hailing” platform for garment production, that optimises apparel production on an order-by-order basis. Whilst this is a paradigm shift in

business model, technology and AI will play vital roles in this transformation,” says Tan.

Jain believes Technology will continue to simplify and transform the way fashion supply chains operate.

“Future innovations like AI-powered production planning and smart factories, will enable nearshoring, accelerate lead times, and drive data-driven sustainability —making fashion sourcing more ethical and efficient,” he says.

While Dodd agrees manufacturing and product design will look very different to the way they do today.

“The challenge as we see it, lies with a move away from traditional, manual product creation to digital. The technology is available, but adoption by most apparel brands is very low, and in many cases it is brands who drive the product development process.

Manufacturing is a huge area of opportunity, there are multiple aspects of product creation that can be improved through the use of robotics, computer vision and machine learning,” he says.

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