Digital product creation in fashion seems to have reached critical mass; it seems to have hit a tipping point where almost every brand and retailer is pushing towards it, if they haven’t done so already. And if they’ve already done it, they’re looking for ways to scale it. Why now? What’s changed? Why is interest in 3D and in DPC so high at the moment?

It’s interesting that you use the term ‘tipping point’ because there are multiple reasons why this is happening. One of these is talent. The creation of fashion is a combination of art and science. The designers are on one side, with a concept or an experience that they want to communicate to the consumers. On the other side you have the pattern makers and the people in production, that work on the science end of it. The talent that we see coming out of school leans heavily towards the art side and shies away from the science side. We even hear young designers that are intimidated by patternmaking and perceive it as potentially creativity restrictive. And that is where our technology delivers high value.

That’s one factor. Another is social media, which is doing two things. Firstly, it dramatically accelerates the speed of communication in fashion; take the Coperni dress during Paris Fashion Week, for example. We saw it instantly, but fifteen years ago it would have taken a few weeks to penetrate and travel. It also creates a scenario where fashion is not dictated top to bottom, today anyone with a TikTok account can be an influencer. The combination of speed of message and the fact that they’re coming from all around creates micro trends, which travel fast. In order to maximise on that you need to sell it immediately. And you need to do this repeatedly. The speed in which a brand has to deliver from concept to general availability on the shelf is moving from 14 weeks (or thereabouts) to almost real time. Then, when you add other parameters like shipping costs and sustainability, you get to a phase where you don’t want any stock because you can’t afford it. With the fact that you have more artists and less scientists in order to manage that, meaning you run the risk of compromising quality.

One key parameter that keeps customers loyal to a brand in general is consistency of fit. And it’s becoming ever more difficult to manage. When you combine increasing speed of concept-to-production, large volume of items and supply chain alignment, next to finding the right fit, the conundrum becomes obvious. Add in remote work and lack of access to a physical mannequin, and you have a host of new challenges.

If you review all of this you have: sustainability concerns, supply chain challenges with often unpredictability in shipping, increased speed and validation with customers before actually producing an item. All of these factors combined is getting into a tipping point, forcing everyone to adjust to the digital journey. But that journey needs
optimization. Every piece needs to be connected to multiple stakeholders or functions in an organisation, including the different technology partners that are providing these different pieces. And there’s still work to be done in this regard. It’s a journey, but the entire ecosystem is moving in the right direction.

Because of all these forces at play, there’s a big weight of expectation being placed on 3D tools and the assets they create because brands are required to bring those assets into more different use cases than ever before: downstream where aesthetics are everything, and also upstream as aids into production. How important do you think it is for 3D assets and 3D tools to be able to facilitate all of those different kinds of deliverables and workflows you’ve spoken about? And, as a result of that, how vital is that continuous connection between 3D simulation and 2D patterns, so that people can start to trust in the assets?

This is key. There are trade-offs between short-term and long-term optimization. Looking at short-term, the focus will be on ease of use for fast onboarding, and the fact that you can create while minimizing the science usage. A designer can create a downstream item that looks aesthetically pleasing and showcase that on social media to potential buyers and get early feedback, maybe even place an order. The frustration comes later when you hit surprises in the production process. These surprises can be around cost or fit and are a mismatch between what you can deliver and what you have sold. And it’s difficult to optimise these two ends.

If you look at Optitex, we provide outstanding solutions upstream. Others might be providing good solutions downstream, and the industry is yet to connect these two ends together. This is a big challenge. As we, and others, move on with development this link is becoming more sustainable and reliable, but we still need to fine tune those ends and make sure that it’s a continuous spectrum.

How can digital product creation workflow, specifically 3D tools, bring brands and suppliers closer together? And in the near-term future, how do you think the kind of work of asset creation at the scale that’s going to be required is going to be shared by different participants in the value chain? At the moment, you have a lot of brands who are trying to do their 3D asset creation in-house, but you have suppliers who have a lot of development and creation expertise who are also building their own. How do you see that relationship between brand and supplier working? And who is going to be responsible for leading on 3D asset creation in the future?

The leading question is a geographical one and the answer varies from one vertical to another within the fashion and apparel industries. Typically, the large players with deeper pockets and commitment to investment will set the tone but, even before that, we have to put some infrastructure in place. When it comes to 3D creation, multiple entities that are manipulating a piece that eventually has to be sold and produced; we're talking about focusing on the same avatar and body measurements that you are fitting on. We’re talking fabric characteristics - the visual and physical measurements of the fabric. And then we’re discussing the available components and trims and about the design and the science aspect: the concept (Design) and the pattern making and all of those components. When you have multiple stakeholders at multiple entities manipulating or creating a product, all these pieces need to be in harmony.
A brand can’t ask a vendor to create patterns and deliver samples if both sides are not working on the same avatar, or if both sides are not referring to the same fabric measurements and characteristics. You need a functioning digital infrastructure for that. That infrastructure today is extremely complex because you have ERP and PLM systems, and then you have 2D/3D systems and there is some gap in between which we address with Optitex O/Cloud. There is a need for a 3D-friendly abstraction layer, one that can work with PLM and ERP systems, and provide a mechanism to assure that when you share avatars and body sizing between different companies, brands and their suppliers, you all have the intellectual properties (IP) rights and the ownership rights managed properly. That information contains the DNA of a certain brand that should not be shared without control. You need to have elements that enable you to have multiple parties share these assets and make sure that all the rights and access rights are being well managed.

The more you can put on the cloud, digital assets and processing the better. There is a technical question of accessibility and cost effectiveness that is changing over time. When it comes to maturity and completeness of interoperability standards, we are not yet in a scenario where you can easily mix and match technologies without having someone from the technology supplier side cooperating with the client and making sure that all the pieces are really talking coherently with each other.

How significant a role do you think digital product creation tools have to play in improving the sustainability profile of products? We all know that it's clearly beneficial to replace physical samples with digital ones, but there are also opportunities like automated nesting, ways to improve material yield etc. What are the extended possibilities where 3D and sustainability interact?

There are multiple sides to that. If you look at how we can influence sustainability, then you have the reduction in number of samples between the patternmaking and design and the associated shipping costs or shipping fuel that is involved with that. You have the reduction of stocks by making sure that you produce the most relevant items to order and don’t produce wasted stocks and minimise returns. And then you have the quantities and qualities of your bill of material and how you optimise that with fabric
nesting, length of stitches, use of accessories or trims that you have. All of the discussed technologies involved here - the pattern making, the 3D, the PLM and the ERP systems - have critical roles in optimising all of that. The other element is how do you embed and track data along the entire product development process that over time you can refer to and assure you are moving in a sustainability improvement direction. If you don't measure it, you can't manage it. Lastly, we tend to wear items more when they fit well.

Where do you see digital product creation, and more generally 3D assets, going from here? What does the near future look like for the way the fashion industry is going to make use of DPC / 3D tools and processes, and what does the near future look like for Optitex?

In the next two years two things will happen in parallel. One is that brands and vendors that have already adopted and committed to 3D technology or digital journey in general will expand it into more of their categories and more departments. There is a tendency to think that everyone is already there using digital pipeline, but we’re still in the early phases of this transition. Technology keeps moving forward and the utilized standards keep evolving. Whether this is body measurements and avatar technology, fabric scanning, visual and physical 3D technologies, upstream and downstream and cloud infrastructure - everything will be connected to really enable those hands that work on a piece work in harmony, track and manage sustainability parameters.

In the longer term, we believe that the industry is moving gradually toward of made-to-order, made-to-measure and one-piece items. Kind of bespoke qualities at mass production cost-structure and availability at least for some fashion and apparel categories. This is a very long-term aspiring objective: to order something online that is really tailor-made to our body measurements. I cannot overstate how critical fit is for our experience. We all very tuned into design, but eventually what drives customers to keep an item for longer and wear it more or avoid returns is the fit quality: how does it drape, looks on and feels comfortable on a specific body. That is a very long journey that the industry still needs to optimise, and it requires tight communication between individuals and between brands and suppliers. Digital infrastructure enables this and will drive it toward a better end, But this is still the beginning steps of a long term, continuous journey of improvement.
Optitex is a global software provider of integrated 2D-3D CAD solutions for apparel brands, retailers and manufacturers. Serving over 30,000 users, our solutions focus on pattern accuracy and predictable fit. With highly intuitive tools, we help our customers streamline design, development and production throughout the supply chain, enabling efficient workflows and tight collaboration for better fit, higher speed to market and sustainable production.

30000
TOTAL NUMBER OF ACTIVE USERS WORLDWIDE

ALISON HAYES
ARIZONA STATE UNIVERSITY
ASOS
BROOK SPORTS
CARMEL
CIOVITA
DECATHLON

ELCATEX GROUP
LI & FUNG
LONDON COLLEGE OF FASHION
M&S
MACRON
MAUREL
NEXT

NIKE
PETIT BATEAU
PERRY ELLIS
RAPHA
SCHOOLBLAZER
TARGET
UNDER ARMOUR
Optitex focuses on pattern accuracy and predictable fit to enable reduction of returns, streamlined workflows and sustainable production.

Our combined expertise in 2D pattern expertise, accurate 3D simulation, and strong 3D collaboration tools, assure consistency throughout the supply chain and support fit-oriented process from the design stage and up until the production end.

With best-in-market network of technology partners, Optitex assumes the role of virtual-to-physical enabler, promoting sustainable workflows, dramatic time and material savings and earning consumers priceless trust.
OPTITEX

A FITTING CHOICE

Returns happen because of fit. Fix that problem with Optitex.

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