FASHION’S DIGITAL FUTURE
3D, Metaverse and NFTs

Alvanon in collaboration with e-learning platform MOTIF
Foreword

We did it AGAIN!!! 3D Tech Fest returned in 2021 and we are so grateful to report that the three-day online event was attended by over 5,000 registrants. Some 40+ presenters shared their exceptional expertise and experience: speakers from management and practitioners in industry, from software companies, creators in the Metaverse and cultural commentators.

Since last year’s conference, the accelerated progress we have made as an industry would have been unimaginable pre-pandemic. We have learned a lot in a very short space of time, and 3D Tech Fest was our time to share experiences and insight and ensure that we as an industry are delivering on our ambition to do things differently and better.

Digital fashion is currently a $40 billion market and growing as the enabling technology becomes more accessible and the wearer base expands. It is very important for future designers to understand and undertake this new skill-set. Alvanon enables companies to generate and leverage their authentic 3D digital assets across multiple platforms and applications. We have seen how 3D avatars can change the way we design, produce, merchandise and sell fashion.

We are so grateful to our presenters, all of whom are recognized leaders in the digital world. I also thank our industry sponsors and ongoing collaborators who understand the value of continual learning, sharing knowledge, experiences and opportunities. Together we are helping to educate not only the next generation of industry professionals, but all us oldies who need to learn new skills (and evolve our old tricks).

This Executive Summary Report highlights some of the key takeaways from this year’s event. We hope you find this practical, informative and inspirational, and will SHARE THIS WITH A FRIEND.

Janice Wang
CEO, Alvanon
ABOUT THE AUTHOR

Petah Marian
Petah Marian is an award-winning futurist, journalist and founder of Future Narrative, a strategic forecasting consultancy that helps organisations build commercially-relevant strategies for future success. She led WGSN’s business forecasting team and has worked with many of the world’s leading brands, including helping some of the world’s largest retailers build new retail formats, adapt to a post-Covid landscape, build sustainability strategies, and given keynote talks for businesses including ASOS and Google.
INTRODUCTION

Disruption in the digital fashion space is taking place across multiple fronts and creating a multi-dimensional opportunity for fashion brands and retailers. Companies are digitalising the product design and communication process. They are using it to reduce the use of resources and time in the creation of physical items. Meanwhile the metaverse is opening up completely new revenue channels.

The digitalisation of physical fashion production processes alongside the rise of the metaverse will drive symbiotic growth. Fashion businesses will work to maximise revenue from their designs, creating deeper relationships between the two, as virtual products are made real and real ones become virtual.

The pandemic accelerated huge changes in digital design and development. Working remotely amid broken supply chains meant that companies had to focus on digitalising product design processes, making communication between factories and offices less reliant on the transport of physical samples or people looking at an item in the same geographical location.

Brands using 3D and digital product design and development processes are recording up to a 75% reduction in sampling, and a 50-75% reduction in time spent on product development.

This is without the other benefits that having authentic 3D assets provide, from being able to engage with wholesalers through digital showrooms, to creating deeper opportunities for consumer storytelling around product innovation.

The Metaverse explained

“The Metaverse is a shared collective virtual space. It has three distinct characteristics:
- It is not storyline driven. It is a virtual space that anyone can visit to fulfill their cerebral needs
- It is not owned by any one platform. It is open, democratic and owned by everybody
- It is driven entirely by User Generated Content UGC.”

Daniella Loftus
Founder, This Outfit Does Not Exist

The next generation of this online reality will be across many metaverses that all have different characteristics and communities.
Levi’s recently reported that its shift to global virtual line assortment meetings using photorealistic 3D renderings of denim garments and samples, enabled it to engage its teams simultaneously, and complete the process in one meeting. This took weeks out of its go-to-market cycle.

3D renderings are also providing opportunities to streamline online merchandising, providing new angles for storytelling and in some cases cutting out the need for physical product photography entirely, and starting to create better visualisation and communication around product fit and innovation.

These are the benefits businesses are recognising now. In addition, there is a whole raft of disruption on the horizon that will mean that businesses that haven’t embraced the digital shift may be left behind as the world of Web 3.0 emerges.

As we move towards the metaverse, there are huge opportunities to create physical products that tie in with the digital world, but also products that diverge entirely from the physical world. With no ties to the physical world, designers have the opportunity to develop items that are purely driven by creativity and aesthetics, and are not subject to the limitations of wearability, comfort, gravity, or even the kinds of resource availability faced by designers in the IRL space.

The industry is primed for disruption and those who fail to keep up might not just fall behind their current competitors, but leave themselves open to digital-first fashion companies. These new competitors might even operate without the legacy of physical products and a complicated supply chain.

Businesses that successfully implement these shifts will be able to both operate more efficiently when developing physical products, while also supercharging their efforts in the digital sphere, able to seamlessly create new products for the metaverse.

However, as these nascent technologies rapidly emerge, businesses will need to invest in the tools that will make them future fit, with new processes, new skills, supplier relationships and technology investments necessary for the brands of tomorrow.
For the brands that are pursuing digital transformation, ensuring suppliers and other partners are on board and participating in the shift will be essential.

“Our suppliers are integral to the process, we’re really co-building and co-developing these assets in a way that can help drive those benefits through our work processes,” says Jami Dunbar, SVP of global product supply at Under Armour.

One of the key partnerships Dunbar highlighted was the one with Alvanon, and how together they are creating new functionality and enhanced capabilities with the avatar sets they use.

“We want to maximise our understanding about how to simulate products in the digital environment. We believe that we can do that more accurately than we can in the physical environment, because we can take a look at how a product fits different consumers with different body sizes.” The brand then verifies the digital tests with physical prototypes to ensure the performance factors work.
CREATING THE TALENT POOL

Finding the necessary talent for the industry to reach these audacious goals is proving to be tough, with established brands struggling to generate the volumes of 3D assets that are required to power digitalised processes.

At VF Corporation, Safir Bellali, Sr Director / Advanced Digital Creation, is partnering with its vendors, working with universities in its efforts to get more people into the sector.

Bellali came into the industry through an unconventional pathway that started in car design. In his role as the chair of the education committee of 3D Retail Coalition (3DRC), Bellali is calling on the industry to work together to create a path for individuals wanting to come into the industry and really understand the skill-set that candidates need to develop.

"Even the educators and the industry don’t necessarily know for sure what skills will be the right ones in the future, everyone is in the middle of this tremendous disruption," he says. "Everyone is barely keeping up, because in the meantime, while all of this is happening, the industry has to keep cranking out products."

He believes that key drivers of success for new people coming into the industry will be through creating learning environments that teach people the foundational principles of product creation and the basic functionalities of the main industry tools, then creating space to allow them to teach themselves.

But for industry professionals that are already employed in the sector that companies are looking to upskill, it’s increasingly a case of running two parallel systems while navigating the transition. For many existing designers, making the leap is challenging, because they don’t have time, mind space, or in some cases, they don’t want to change.

"We’ve understood that this needs to be a collaborative process where you create this capability in parallel with the existing process. And then you work slowly, the two systems working together, and in that there’s a transfer of knowledge. You show them what’s possible, and the cool stuff they can do. Then slowly the partnership will strengthen and become one," Bellali says.

“The talent pool that we keep referencing is more of a talent puddle.”

Safir Bellali, Chair, Education Committee of 3D Retail Coalition & Sr Director / Advanced Digital Creation at VF Corporation.

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NEW ROUTES TO MARKET

In the design of physical products, digital design tools are already shortening the pathway to market, getting people onto the same page in real time at multiple points in the decision-making process - from dealing with suppliers, to planning and buying.

Shifts in this space were accelerated through the pandemic, as staff were forced to work from home, with digitally savvy brands able to seamlessly move to remote working.

For some retailers, the transition to 3D CAD reduced cost and lead time in the product development process. One retailer reduced lead times from 23 weeks to three weeks, allowing them to increase their speed-to-market and their margins.

Similarly the creation of new asset forms is making the relationship between digital and physical goods smoother.

Brands and retailers are reducing the number of SKUs they are producing in order to streamline operations. Coach, for instance, is cutting the number of handbags it produces each season by half. As brands go deeper on fewer items, digital assets can create a sense of newness and novelty among consumers, as well as helping brands to feel confident about the buying decisions they are making.

Non-fungible tokens, NFTs, can give brands the opportunity to judge the potential popularity of a colourway, while also giving the consumer a digital good as a reward for pre-ordering. In this scenario, the digital asset becomes an additional benefit for the consumer, giving them something while they wait for the physical item to be made.

Consumers are also being asked to choose which they value more, the NFT or the physical product. Designer Law Degree has created the Brain Boot as a physically redeemable NFT. People who purchase the boots can either preserve the potentiality of the boots as an NFT or burn the NFT and redeem it for a physical pair.

“This handshake between physicality and virtuality represents a world first interpretation of footwear,” says Law Degree.

What is a Non-Fungible Token (NFT)?

A Non-Fungible Token is a unique digital asset that is stored on the blockchain. Any piece of content - an image, video, or digital skin - a person or company owns can be turned into a token on the blockchain. When organisations do so, they make it clear that it’s unique and can’t be replaced with something else (“non-fungible”).

Coca-Cola’s first series of NFTs includes this digital bubble jacket.
Photo: Daz 3D and The Diigitals
Web 3.0 describes the convergence of a series of technologies that are likely to have a significant impact on the way we live our lives into the future.

For some, it describes the metaverse, encompassing the shift between the action of scrolling a website, to strolling through an immersive space, for others it’s about the decentralisation of data and the shift towards blockchain exchanges using cryptocurrencies to pay for NFTs.

As avatars within these new spaces need clothing to wear, they are providing brands with a fresh revenue stream. With 2.69 billion people saying they played video games in 2020, and the average gamer spending more than eight hours a week on games in 2020, there is a real opportunity for retailers to enter this space.

Beyond the gaming sector, the things that drive social currency are changing. Where prior to the pandemic, status was expressed through experiences, the Instagram post of the hard to reach beach, or from a table at a buzzy restaurant, metaverse early adopters believe that this is shifting into ownership of limited edition virtual goods.

Yat Siu, Chairman & Co-Founder, Animoca Brands, called for people to start thinking about the metaverse as something that we’re already living in, not something that we’re moving towards. “If you think about the fact that a lot of us, particularly because of COVID, appreciate our virtual values more than the physical ones. How often someone likes your stuff on Instagram or on Facebook, or for the people who are playing games, the value of skins, the kudos that they get for online achievements versus physical achievements. I would say we’re already in the metaverse.”
More collaborations are emerging that bring traditional brands into virtual spaces, with Rebecca Minkoff and Puma two recent announcements. But brands will need to ensure that they are not just replicating physical goods in virtual worlds.

Digital designer Stephy Fung, who recently partnered with Glenfiddich on a series of NFTs targeting young Chinese HNWIs [high-net-worth individuals] that celebrate her own Chinese heritage.

“Digital wearables will be the next big thing within NFTs, and people will be able to utilize them within AR, VR, or metaverses,” says Fung. “There’s a lot you can do with digital that you can’t achieve via real-life garments, such as animated graphics, making materials glow, or defy gravity.”

KARL LAGERFELD NFT

To highlight how that is taking place, Karl Lagerfeld’s first, most-exclusive NFT drop sold out within 33.77 seconds. The digital icon recreates the designer’s signature look and wardrobe, which users will be able to change through future drops. The people who bought this NFT can use it with augmented reality, and can enjoy it as a virtual collectible, or post images of it in their social media feeds.

“As a person, Karl was incredibly irreverent. Even though he was this design icon, he never took himself too seriously and he always said that he loved himself as a comic. So we are convinced that Karl would be really proud of this,” says Mirjam Schuele, Senior Vice President Marketing at Karl Lagerfeld.

The Karl Lagerfeld team worked with The Dematerialised on the drop. The Dematerialised Co-founder, Marjorie Hernandez emphasised that the success of the NFT drop was down to how the team at Karl Lagerfeld ensured that they were conscious and sensitive about getting it right, and not subscribing to a trend or moment of hype. Rather, she says, they really “understood the market, the macro trend that dematerialisation supports, and how the persona of Karl enters the metaverse.”
The shift towards digitalisation and the metaverse is opening up new job roles and career paths for those in the sector, particularly those wanting to take on a more entrepreneurial role.

Leanne Elliott Young, CEO of Institute of Digital Fashion helps companies create IRL and URL solutions, including digital fashion avatars, looking at how the company can build activations and workflows that build a more sustainable, democratic and inclusive industry.

NFTs are empowering the creators to build new products that they can monetise individually. Stephy Fung, a 3D artist and motion designer says that NFTs are giving her so much power. “I’m deep into NFTs because as a creator, it’s given me so much power, and that’s something I really value as a creative. Previously, to make a living you were reliant on client work, so you’re always creating something for somebody else. So it means I can create art that is mine, and take a bit of that creativity back for myself.”

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NEW CAREER PATHS

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Digital design processes create huge opportunities to reduce waste from the supply chain. With retailers on average producing four samples per style, a brand developing 300 styles per week, would create 1,200 samples. If a brand can reduce that to one sample per garment, that would be a reduction of 900 samples a week, or 46,000 per year.

Beyond the carbon savings of moving to digital planning and selling, there are also gains to be made from selling virtual products.

However brands will need to be careful with how they work to monetise digital fashion and NFTs as those being powered by blockchains and cryptocurrencies have an incredibly high carbon footprint. As people increasingly look to using digital fashion as a means of reducing their environmental impact, it will be important that brands look to more sustainable technology solutions.

Increasingly blockchain systems will work on a proof of stake rather than proof of work. The Dematerialised Co-founder Marjorie Hernandez emphasised this in her work with Karl Lagerfeld. “One of the things with Lukso [a blockchain infrastructure] is that we are making sure that we use the latest state of the art blockchain technology. This means we don’t use proof of work, we are using proof of stake, which consumes 90-95% less energy. This is going to be the way of the future in terms of blockchain technology.”

Glenfiddich partnered with designer Stephy Fung to co-launch a limited-edition NFT fashion collection — the perfect choice for young HNWIs in China.

Photo: Stephy Fung
One of the key tenets of the Web 3.0 movement is a redistribution of data and its inherent value away from the current big five FAANG companies, which include Facebook, Apple, Amazon, Netflix and Google (Alphabet).

“Today, we live in what we describe as a form of digital colonialism. It is feudalism, the same way that it was 600 years ago. We’re constantly giving up our most valuable resource to the platform, our data. And the result is a mass enrichment of these platforms,” says Yat Siu, Chairman & Co-Founder, Animoca Brands.

In this more distributed landscape, data ownership is a product that an individual can trade. Currently, data stays inside the platform and is not recognised in the platform by the creator.

“If I’m using Facebook and giving away all our data for free, I have to then spend my money to acquire our own customers, to market to them,” emphasises Siu.

For Siu, the importance of the blockchain is not specifically about cryptocurrencies alone, but really about owning one’s data. As data on blockchains is decentralised, it is not owned by anyone, but equally by all the people who use it.

“The key tenets of the Web 3.0 movement is a redistribution of data and its inherent value away from the current big five FAANG companies.”

“One of the key tenets of the Web 3.0 movement is a redistribution of data and its inherent value away from the current big five FAANG companies, which include Facebook, Apple, Amazon, Netflix and Google (Alphabet).”

“Because it needs a consensus of all these other users, all these other nodes around the world. It also means that if you want to alter a piece of data, or you want to modify it, or even save, remove it, you can’t do that, unless you have the consensus of the network. And that consensus isn’t one company, it is, the entire network where you need at least 51%, making it perhaps, the truest form of democracy,” argues Siu.

This is creating new job opportunities, with Siu explaining how his company’s game Axie Infinity: an online, blockchain-based game is helping to lift people out of poverty through earning in-game tokens that can be cashed out in local currency. The game, Siu says, is generating US$2bn in sales. People in locations like the Philippines are paid by players in richer countries to cultivate in-game creatures called Axies, which can be battled or sold at a profit to other players. This, Siu emphasises has given employment to people in places like the Philippines or Venezuela, earning on average between US$500-1000 a month.
Digital Fashion is currently a $40 billion market, and offers access to an attractive demographic for brands. The largest number of female gamers are between the ages of 18-35, whilst the largest number of male gamers are below the age of 18. These consumers are early in their lifecycle and highly susceptible to forming deep brand connections. While it's likely that many of these gamers would not have the disposable income to spend on a branded luxury physical good, by consuming a Digital Fashion item they can begin to seed brand connection, and benefit from affiliations, which can translate into physical purchases as their income grows.

The great potential for brands to derive benefits from Digital Fashion come with an important disclaimer: 'if done correctly'. For many years fashion brands have ignored the gaming space due to preconceptions that gamers are not the same people spending thousands of dollars on a luxury bag. Whilst no longer entirely true, the assumption that gamers and physical fashionistas belong to different consumer groups is not entirely wrong. Fashion is an industry where trends are often set hierarchically; by an illuminati of expert tastemakers. However, gaming culture is collaborative, inclusive, and importantly bottom-up. Rather than a community being subject to standards, the community sets its standards, and adhering to these is the way to engage.

Take Gucci’s success as an example. Rather than just telling players to buy a branded skin and assuming that centuries of prestige would do the rest, Gucci took the time to understand what elements would provide true additionality to the targeted gamers. Instead of dropping a branded skin directly into the Roblox store it created a space for gamers to engage with the brand; a vibrant virtual environment with multiple experiences and rooms, all designed by Alessandro Michele.

The brand took the time to understand what would offer the greatest player conceptions of value; using time-restricted drops to simulate scarcity. This was a different route to the one Nike took when moving into Fortnite, where it capitalized on the link between value and in-game talent. When dropping its Nike Air Jordans, purchase came with in-game challenges attached, which could in turn be used to control colour. Thus whilst any player could buy the pack (for 1,800 V-Bucks - just under $20) only a skilled player could change the colour; adding status via in-game flex to ownership of the digital good.

The interactions of Nike and Fortnite within in-game worlds sets a good template for other brands to study as they move into virtual spaces; one based on time and understanding. In-game worlds hold their own cultural standards and a unique set of conditions around which worth is based. It’s a world moving fast, at the speed of data, but for those who respect and adhere to the culture being created, unlimited opportunities for both creativity and monetization await.

**WHAT A $4,000 GUCCI BAG CAN TEACH YOU ABOUT THE FUTURE**

**ABOUT THE AUTHOR**

Dani Loftus, This Outfit Does Not Exist

Dani is the Founder of This Outfit Does Not Exist; an agency bringing Digital Fashion to life. Her work has been featured by global players such as CNBC, Bloomberg, Parsons, Nikkei and Maze
Additional Resources:

3DRC Digital Product Creation (DPC) Skills Matrix:
SAFIR BELLALI Chair, 3D.RC Education Committee

We are the 3DRC Education Committee – a global group of individuals working for brands, retailers, vendors and academic partners connected to the fashion industry. We are excited to be working on a resource for brands & retailers to help navigate the current state of our industry and the growing digital skills gap that many are facing. We are currently focusing on the skills needed for the design creation and product development processes. We really appreciate your feedback so that we can ensure this resource is helpful to you and your colleagues. Thank you in advance for your time!

Please start by clicking HERE to fill out the survey
A new research report from the Institute of Digital Fashion suggests people want more choices for diverse representation in online spaces.

When it came to fashion, IoDF's research found that 92 per cent of people report that customisation is important when creating virtual avatars. The range of desired types of clothing reflect the range of styles people want in virtual spaces: with surreal (24 per cent), casual (20 per cent) and couture (15 per cent). Religious garments were especially important to offer, according to Leanne Elliott Young, co-founder of the IoDF, which also conducted a number of in-depth, one-on-one interviews. Almost 60 per cent said that their "URL" style was similar to, or the same as, their "IRL style," with 40 per cent preferring a more "surreal" style.

Click below to read the report now.
To satisfy the unprecedented demand for practical and transformative digital knowledge, Alvanon in collaboration with MOTIF hosted their second annual 3D Tech Fest featuring 3D tech leaders, creative directors and innovators from across the globe.

For more information and to stream the 3D TECH Festival 2021:
www.motif.org/event/3d-tech-festival-2021
About Alvanon

Alvanon is a fashion technology company, focused on enabling companies to generate and leverage their authentic 3D digital assets across multiple platforms and applications. It has developed a unique and innovative body data-driven approach, with a consumer-scanning element, to solving the challenges of sizing and fit inherent in the apparel industry.

Since 2001, it has dedicated itself to body shape data research and has gathered more than 1.5 million body scans in 30+ countries, most recently, in China, Colombia, Costa Rica and the US. Combined with its deep apparel knowledge, this has allowed Alvanon to develop thousands of fit standards for hundreds of brands globally.

www.alvanon.com

About MOTIF

MOTIF is the apparel knowledge hub that connects professionals around the world with the skills and industry expertise they need to transform their businesses, lives and careers. Launched in 2018 by parent company Alvanon, MOTIF tackles the industry need for evolving skill sets and continual learning.

Motif.org provides a unique online learning experience with education on important industry topics across the supply chain and training on fundamental, technical, business and creative skills. MOTIF is working with top industry practitioners from around the world to develop world-class courses, for fashion, apparel, footwear and accessories professionals and corporates, that can be accessed from anywhere, at any time.

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