

Speaker 1 ([00:09](#)):

[inaudible]

Speaker 2 ([00:09](#)):

Clothing culture. I'm Emily Lane. We speak with experts where we explore the global dynamics, that shape trends in the fashion industry,

Speaker 3 ([00:20](#)):

Two by stars, design group, a global production and design house with over 30 years of industry.

Speaker 1 ([00:34](#)):

[inaudible]

Speaker 2 ([00:35](#)):

We are excited to talk to you today about the evolution of technology and its impact to the fashion industry. So, Brett, I remember coming to stars design group for the first time, two years ago, and seeing your amazing presentation and learning about the design that you embrace in house 3d design now, after being in the industry myself

Speaker 3 ([00:58](#)):

And seeing the presentation a thousand times. Yeah.

Speaker 2 ([01:04](#)):

Um, you know, I, I've seen more and more talk of 3d design. I know that it's still, you know, has a smaller imprint in this industry, but then to add it for nine years now. Yeah. So I I'd like to talk a little bit about 3d design and how it's kind of revolutionized the space, but also kind of want to learn a little bit about some of the benefits that you see that it imparts and then we can kind of evolve from there.

Speaker 3 ([01:32](#)):

Yeah. He mentioned we've been, I can't say I, because I personally haven't been doing the 3d design. We have a wonderfully talented staff that DOE then, and, and started about nine years ago. And I think they're outrageously capable in, in what they do today. Today we do 3d design faster than we've ever really done 2d design. And it's with a wonderful partner, Sharon Lim out of Singapore, the company is browse where we embarked on a journey with them and it's been a great ride. They, they have a great platform. They've created an open platform. So there's a lot of innovation built into 3d design and 3d design has itself been innovating and evolving rapidly in the scene. And I think, you know, simple benefits certainly are that, you know, the garment looks more real. Um, and I think that helps brands. Um, designers, retailers see the garment and the collections, what they are and make better decisions.

Speaker 3 ([02:28](#)):

But that's really the very surface of 3d design built into the 3d design program that we work with. You know, we start with a pattern file forward so we can even be doing virtual fit as part of this whole process that I think it's about, you know, Americans. I was like to say, we live in a microwave society. We want everything fast. And you know, there's no exception. You know, I've been on a number of calls with people that want the fast turn model. They want things quicker. And you know, you have make decisions

faster and to make decisions faster, you have to visualize what decision you're making better. Right? And so I think 3d design certainly helps with the pandemic and COVID, it serves another purpose. It serves connecting that design vision to remote parties in different ways. And in many cases today, we're seeing amazing things happening with 3d design, where you've added 3d animation and you're having these 3d virtual fashion shows full collections are happening and it's happening all over the world.

Speaker 3 ([03:35](#)):

There's a amazing gala NEEF of Rumba out of Congo. She's Congolese. She's got a brand called Hanifa and I urge everyone to go take a look at her YouTube, uh, segment. It is amazing. And so, you know, we like to think that we're, you know, this Western world has got technology and the rest of the world trying to catch up when you see what NF is doing, it's just really mind boggling. And I think a number of brands Coture and on and on down are really looking to 3d design to change, you know, the way that they go to market, the way that they visualize collections. It's just amazing and really exciting for me.

Speaker 2 ([04:18](#)):

Yeah. I can definitely see those benefits of having a more accurate representation of the design by being in 3d and being able to actually see how it moves and flows. And, you know, I can definitely understand that and how it speeds up the process and so forth as a designer, like from a creative standpoint, I would think it could be really tactical, you know, PFC and fashion designers create these amazing boood boards that have fabric and images and, you know, and then they're draping and sketching and getting their inspiration from the sunset and just various things. So how do you recommend kind of justifying that tactical need on a creative standpoint while knowing that the world is evolving and moving to a different model?

Speaker 3 ([05:07](#)):

I think each serves a specific purpose. I remember a meeting where I had a bunch of designers, relatively new, sitting around a table, and I was asking each one about, you know, their experience and what their history was and what particular, you know, type of garments they designed and how they went about that process. And, then I kind of dropped on them. You know, how do you think technology plays in your design role today? And it was almost unanimous, Oh, soulless, you know, it was like we're artists and this has no place. And, and so I kind of didn't say anything. And then they started asking about stars and what we did. And when I went through the presentation, I showed them our 3d design, their mouths dropped. They couldn't believe how realistic this 3d design looked. And they were, they started commenting about, Oh my God, we can show so many more garments. They can see it virtually, and it will save us so much time and allow us to have so much more of a breadth of line.

Speaker 3 ([06:04](#)):

They lit up because of the economics of technology that helped them. You know, they're not spending hours creating these dresses or garments or whatever they were creating, um, to show to the customers. They could do it digitally, get feedback from the customers, then move down. The path on design designers are every bit artists like, you know, painters are, they just don't use brushes. They use fabric. And so, you know, that's never going to change. Does virtual 3d design and technology simply help support all of the other stages that will ultimately go through it. We're going to ultimately make decisions about fabrics. We're ultimately going to be doing fitting and styling sessions and all of that. But what I think 3d design brings today because it's moved so far from, you know, this cartoon animation to

really virtually real. It helps distill thought processes. It helps distill some of that vision so that they can make those next steps in a more comfortable and easier way.

Speaker 2 ([07:09](#)):

That's a really good point. You don't have to wait until the end of the process to realize that this idea didn't actually work.

Speaker 3 ([07:15](#)):

Yeah. And even when it comes to fit, I mean, like I mentioned, even in 3d programs, we're making fit decisions in a virtual landscape. So as you're creating these garments from the pattern files forward in a digital landscape, you can also utilize technology again from the avatar forward that avatar has a basis in scientific fit, and you can create these designs and your patterns are virtual space and work through some of the challenges that you've gotten in design in a virtual space, as opposed to utilizing the resources of the fabric. And frankly, the resource of time,

Speaker 2 ([07:51](#)):

Even the avatar itself is an innovation in itself. I know that it starts it's Alvin on, um, speak to that a little bit, because that does an incredible evolution in going from the dress form to,

Speaker 3 ([08:07](#)):

Yeah. So I think, you know, when we're looking at fit and we're looking at form, you know, there've been a lot of ad evolutions in that you mentioned the dress forum and how all of that started. And that had kind of a basis in technical fit as the world saw it at that point. And I think there are a number of choices, but we've chosen to partner with a company called Alvin on. I think they bring science to fit. They scan thousands of bodies all over the world. They segment them, they run algorithms and programs to determine what they think this ultimate body type should look like. Um, they create these, you know, uh, mannequins with a number of points of fit. And there's a very interesting science behind both those mannequins and how they grade up and based upon what they really see within these body scans about how body types change in our world.

Speaker 3 ([09:02](#)):

You know, when you think about moving from 3d design into a virtual environment, you know, that avatar can be really in a virtual environment, any shape or size. It can literally be like avatar the movie, you know, seven foot tall blue with a tail. And so if you're really going to do designs in a virtual space, you have to make sure that there's this basis for technical fit in a space. And Alvanon partnered with browse, where to import that all of their intellectual property in terms of fit into this virtual space to allow these fit decisions to happen.

Speaker 2 ([09:37](#)):

What I found fascinating when I started learning about Alvanon was thinking about clothes, you know, size small to medium, to large, to actual large, you know, it's like, you kind of think, Oh, okay. So that small going to medium is just a little bit bigger, everywhere around. And then medium got the largest, just a little bit bigger, everywhere around. But you know, when Alvanon went through their process of getting all these body types, the discovery was very clear that people don't grow. You know, if right. If I was going to suddenly gain 15 pounds, 20 pounds everywhere on me, wouldn't grow in the same place.

And so, right, right. And so, you know, that scaling that you talk about is really making those accommodations where they need to, as somebody grows.

Speaker 3 ([10:24](#)):

And I think exploring this detail behind fit is critically important because we've mentioned this whole evolution to online space when you're in brick and mortar, and you've got customers being able to walk into the store, try the garment on, Hey, it doesn't fit. I put it back on the rack. That's an easy like consumer exchange. If they don't like it, they bring it home. They can walk back into the store and exchange in an online world. You're virtually sending this package via a courier back to a warehouse that has to restock it. It's a very expensive process, right? And so limiting returns, exchanges, et cetera, are critically important to profitability of a lot of companies. So really thinking about fit. And I think illustrating and being transparent about what your fit is to the online consumer becomes really, really cool,

Speaker 2 ([11:15](#)):

Tremendous, really important. You know, you talked about the experience of going into a fitting room and, you know, there's, there's some things that companies are doing in response to COVID and of course, embracing technology of, you know, going to a fitting room, but not actually physically trying to close on standing in front of a mirror that shows you what you would look like with that garment on that has presented. What is that technology, by the way,

Speaker 3 ([11:43](#)):

There's a number of technologies that are out there. But, you know, I think the industry talks about it as like smart mirror technology. Um, you know, one of the, I think one of the larger are the ones that I've heard about than most is called FX mirror today. And so I think as this technology grows, there'll be a lot of people in that space.

Speaker 2 ([12:02](#)):

What is surprising to me about that? The awareness that's come with implementing that technology though, is the difference of trying a garment on physically versus seeing a representation of it.

Speaker 3 ([12:16](#)):

It's perspective. Boy, that's a lot easier. I'll tell ya

Speaker 2 ([12:19](#)):

Layman's perspective. You know, we can touch a garment, love it. We can go into a fitting room and go, nah, there's not the best lighting in here. Maybe I need to take it home and see how it looks in front of my own mirror. If we love how it feels enough. But if you're looking at a representation, that's like, here's how you're going to look in this garment might be less forgiving than right. Then what my mind is. And so I think that that's, what's interesting about companies embracing this technology is that there's been this kind of unforeseen challenge where they're facing that, you know, what you're seeing

Speaker 3 ([12:54](#)):

Is reality and people don't really want to see as much reality. So I think, you know, that the tightrope you'll have to walk is as technology comes technologies, in many cases, it's very black and white, right.

Zeros and ones, it is showing and representing hopefully if the technology works right, exactly what you're going to expect. And so when you think about it from a logical perspective, you want to know whether the garments are going to fit well. But I think what technology needs to learn in this virtual space, as you get into these kinds of mirror deals online that are happening. Amazon's investing a lot of dollars into this now is how do you nuance it, right?

Speaker 2 ([13:32](#)):

How do you filter?

Speaker 3 ([13:34](#)):

I'm sorry, but the world is marketing. And so how do you say yes, it fits you and the lighting is going to be so much that you're also going to feel like you look good in that. And I think challenging that paradigm is going to be an interesting one over the next few years,

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Speaker 2 ([13:49](#)):

The avatar does a little fun twirl, right? I'm enjoying this garbage. It might be an option. So, um, 3d, we talked about that a little bit is making plays in other areas of the industry as well. Uh, knitting for example, um, which I think has a real play with regards to the sustainability conversation. Okay.

Speaker 3 ([14:11](#)):

Like a number of conversations, you know, America for a long time has wanted to recapture some manufacturing sectors that they've lost or offshored. And so there's a whole conversation about nearshoring. That's kind of the term, I think, to nearshore, some of these technologies where we've outsourced them to countries with labor costs that are substantially less than ours, we have to embrace technology to be able to do that. And you know, one of those types of technologies that is happening is whole garment knitting or 3d netting. There are two major companies that have been doing this for years and perfecting it for years and that stolen Shima. And I think that as that technology continues to progress the ability for those machines to knit faster and more efficiently, it we're going, Oh, they're, they can knit very complex today. It's mind boggling what some of these machines can do.

Speaker 3 ([15:08](#)):

You can actually program these machines to do some things that you can't really physically do in traditional knitting. You know, you can transfer from a normal yarn to a Wiki yarn, to an antimicrobial yarn invisibly on a garment. You can shape it to a specific body type. You know, as we talk about, you know, different changes in the industry, there's a whole conversation about custom sizing, right. You know, as we deal with all these returns and online environment, if you can upload your body type and a computer aided knitting program can knit the garment to fit your body type. Exactly. There goes the return issue, right. And hopefully the aesthetic issue is improved. And so that's a really exciting technology that's occurring.

Speaker 2 ([15:52](#)):

It kind of sounds like a design dream. Really, if you can do all of these really complex ideas, you know,

Speaker 3 ([15:59](#)):

It is a design dream. Again, it requires technical ability, you know. To program these machines requires someone that really understands the detail behind programming. I think both companies are really trying to create programs that are simpler for a designer to use today. A designer can't really step in easily and walk down and create a stole knitting programmers, especially as Shima Seiki knitting program, and just turn it on and watch it go. However, both companies really would like that to happen. They want it to be very plug and play very easy to do. And so that's kind of that growth of technology.

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Speaker 2 ([16:35](#)):

I want to talk a little bit more about this conversation as sustainability is going to be a common thread, because it is one that is, it's so important to the industry and consumers, everybody is, is gen Z, I think. Absolutely. And we saw something incredibly interesting pretty recently, that recycled material. Yeah. And I would love for you to share a little bit more about this technology that,

Speaker 3 ([17:04](#)):

You know, with all of these challenges that come up and sustainability, being a big topic of conversation. Look, there is no question that, you know, we have big issues in our oceans with plastic. I've traveled the world. And I have seen in a lot of these countries that it pour down rain and the soil stays completely wet because it's so clogged with plastic bottles that none of the water can absorb into the soil. And he just all over the world, I'm on my 70th country. This is an issue. And so, you know, the way that we manage consumerism responsibly for the future is something that we all have to undertake. And today this is where technology again, plays this role in understanding how we evolve materials and substrates that we're used to running all the time, polyester, frankly, it's plastic, right? That is really the basic, you know, material behind polyester garments.

Speaker 3 ([18:03](#)):

And we've embraced polyesters society, you know, performance fabric anti-wrinkle, et cetera. Well, those don't biodegrade, you know, very well. And so when we think about plastics in our ocean, we don't really get as far to think about these polyester garments. So there are a lot of technologies today that are trying to create one new biodegradable polyesters and two trying to figure out, Hey, how do we recycle or upcycle current garments that are in this stream of our consumerism and not getting to the landfill. And so one of those technologies we saw recently was very interesting where, you know, you would sort garments by color. They shred them and everything. And then a 40 foot container. You can run it through to be completely mobile. You shred the garments and actually moves them into all the components that require these fabrics to go back into fiber and then yarn stage.

Speaker 3 ([18:57](#)):

And I dunno, it's an amazing process. It is an expensive process today, but as technology always shows away, what's expensive. One day becomes really affordable the next day. And, you know, to move, if you throw in a 3d whole garment knitting machine at the end of that, wow, you basically start at one end, you shred the garments, you break them down into fiber or you, then resuspend them, you throw them into 3d whole garment knitter. You have a brand new garment going out the other end. Right. So yeah, really, really fun stuff happening in that scene.

Speaker 2 ([19:28](#)):

So fascinating. I think one of the challenges is really helping to educate that consumer, that these technologies, they are expensive and, you know, fast fashion and the role that it played with creating different price points for apparel and, you know, really understanding, uh, what's a realistic price point for something that's sustainable for something that has this incredible technology behind it. It seems to me like that might be one of the core challenges in the industry.

Speaker 3 ([19:58](#)):

It is a core challenge. I think that the educational price point and this responsibility, while people on the surface want to believe that they're going to make a difference. Very few, want to spend more to do that. Wow.

Speaker 2 ([20:11](#)):

As you talked about earlier, the industry has not really changed its price points. Yes. What, 30 years. Yeah.

Speaker 3 ([20:19](#)):

Yes. And so, and we're finding, remember the West is now not the primary consumer market anymore, and then you have, China is a massive consumer market. And so price point becomes affordable. You're onboarding these countries that have large populations now, disposable income that want to spend that. And they're going to walk in wanting affordability and garments too. So the thicks, if you will, has to start occurring at the yarn stage, the technology stage, the approach that we're looking at. And I think that there has to be this investment on a global scale to say, how do we change polyesters that are non-degradable to biodegradable? How do we talk about dry dine technologies? How do we amp up, you know, water reclamation units? There's a lot of things we're going to have to do to understand on a mass scale, these changes that can occur, how do we create those changes and then pass it along economically to the consumer.

Speaker 3 ([21:17](#)):

One of the big things that are helpful in that world, you know, not super helpful to those that have that, you know, wholesale kind of structure or brick and mortar structure. But this direct to consumer model online is that technically in a lot of cases, overheads are less expensive than these multiple hand shifting through there. So when you have a direct to consumer model, you might be able to pay a little bit more for some of these technologies than you would normally as a buyer of those garments and then pass that, save, reduce the expense to the consumer at that level. So,

Speaker 2 ([21:48](#)):

Oh my gosh. So much to think about here, are there other shout outs to things that you're seeing on the horizon or anything that you see coming into play that can be a game changer for the industry?

Speaker 3 ([22:01](#)):

I think there are a lot of finishes and fabrications that we'll probably talk about in future episodes. You know, that the economy is our business. Our industry is constantly changing and how we address all those important points are something that we as an industry have to embrace. And then the exciting part, the fun part of the industry is seeing the evolution of fibers and textiles and looking at how natural

materials can perform like synthetic materials. You know, my psyllium, a fun guy, if you will, uh, an approach to fungi, there's, there's an amazing things that are going on with mycelium and other substrates. So I'm looking forward to talking about that in future.

Speaker 2 ([22:39](#)):

Oh my gosh. So many wonderful things happening with these textiles. So absolutely looking forward to that conversation and so many more. And if you have topics that you'd like for us to explore, if you even want to be a guest on our show, you just reach on out. We can't wait to hear from you. Thank you for joining us for this episode of clothing.

Speaker 3 ([22:59](#)):

Thank you.