

AN Apparel WHITE PAPER

# FROM DISCOVERY TO DEVELOPMENT: A MODEL FOR SUCCESSFUL 3D ADOPTION



With proper preparation and flexible rollout, businesses can enable and support their workforce to be ready and willing to embrace 3D, fueling product collaboration and connectivity.

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**W**hen you hear people discussing “the movement” or “the cause,” with references to “political repercussions” and “eye-opening discoveries,” you might expect they are delving into one of the great geopolitical issues of our time. Global warming? Civil rights? Immigration reform?

In more and more fashion circles, the topic eliciting such passionate speech is 3D. The “movement” is the wave of change 3D can bring to apparel companies — the increased speed, the streamlined sharing of new concepts and ideas, the excitement among devoted users. The “political” side of things can be the reluctance to take on too much change, shake up the status quo or allocate funding to 3D. Fashion professionals across the ranks are facing these 3D issues and others.

3D has fascinating applications for apparel. Virtual fit testing, 3D line presentations and 3D design conceptualization are just a few end uses. Early adopters have documented successes in speeding product development, reducing sample-making waste and improving intradepartmental collaboration. And with online sales surging, it makes sense to invest in digital and virtual solutions.

Yet 3D technology adoption still is not widespread. One reason is the prospect of significant business process change. Understandably, some executives hesitate to invest in a new technology — even when there are clear advantages — if they worry about successful adoption. Fortunately, as more 3D implementations gain traction, there are emerging best practices to help businesses overcome roadblocks stopping them from driving forward.

### Introducing 3D to End Users

For 3D to be successful, it is essential to ease into the technology through a free-form process of discovery. As important as the investment is the necessity to give end users the freedom to explore 3D in a hands-on way in their native work environment.

During this pre-implementation preparation, allow users to generate their own ideas about how 3D could help them with some limitations of traditional processes. Encourage them to share their insights about how 3D could change the way they work. This also is a good time to elicit feedback on potential challenges they believe management will need to address.

During the technology selection process, the user experience should be top of mind. Margarita Pasakarnis, senior patternmaker, VF Jeanswear, was hired by the Greensboro, NC-based fashion industry giant specifically to help it leverage 3D. She says it’s possible to keep 3D straightforward and simple, while being highly effective. “You can make it very, very complicated, but you can also make it work very easily and simply. I believe that is the genius of this process,”

she says. “There is that barrier of fear about using this technology, but if you make it simple and fun and useful across different operating systems, people will be much more likely to embrace it and use it. That’s where I see the future — when people love it and enjoy using it.”

Bret Schnitker, CEO and president, Stars Design Group Inc. (SDG), agrees it is very important for 3D technology to be intuitive and not cumbersome. Before 3D, SDG had long been a leader in virtually real 2D renderings, helping apparel brands to visualize their seasonal lines, which SDG can manage from design to delivery. Before investing in 3D, he asked himself, “Is it possible to enhance the experience without increasing lead time or burden on our design staff?”



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Another necessity for 3D success is to gain acceptance from patternmakers early on. Patternmaking is at the heart of 3D product development because these employees are responsible for creating the blueprint from which all garments will be made. Every decision, large or small, about a style, must make its way into the pattern before it can become reality.

Patternmakers, like their counterparts in design, need to know that 3D is not a replacement for their skill sets. Kristen Ohlsson, senior director of technical design, Global Brands Group (GBG), kids’ and men’s wear division, has been entrenched in helping GBG implement its 3D vision. “There will be fear, and people will ask if they will be replaced,” she says. “It’s not about avoiding that fear. You have to embrace it and assure them that 3D is not a robot to replace them. It’s a tool to help them.”

After all, virtual design involves many of the same steps as physical design: testing fabric properties, incorporating design information, grading patterns, adding trims and finishing, stitching the garment and fitting the garment. Teams are just doing them digitally.

"The software is only a tool. It will not make you a patternmaker or designer," Pasakarnis says. "You still have to go to college and be a good patternmaker or designer because it's an art. It's not something the computer can do. The software is only a tool to make it faster. It's not a replacement. It's a great tool in the master's hands."

Both VF and GBG have found that younger, more inexperienced employees have gravitated to 3D, quickly learning and adopting it. Leaders at both companies latched onto the Millennials' enthusiasm and that of other employees who demonstrated openness to try 3D. "We really teamed up with those who were excited from the get-go," says Mario Lerias, vice president of technical design, GBG kids' and men's wear division. Their excitement proved to be contagious. "The people who weren't excited are now excited," he says. "They see we are going somewhere."

VF featured successful 3D projects at team meetings, inspiring healthy competition. "We would highlight how someone had successfully refitted their line with 3D, for example. It was a good way to introduce the technology and show what people were able to do with it. It wasn't being forced on them," says Robert Garner, pattern development manager, VF Jeanswear. "A small level of competitiveness started because no one wanted the others to get too far ahead of them."

### Adding 3D into the Workflow

A smooth 3D implementation will not necessarily follow the standard trajectory of typical software implementations. Formal training sessions, an implementation timeline and the user manual may take a back seat to more ad-hoc, on-the-job utilization of the technology. There can be more of a pull vs. push approach. Leaders of 3D initiatives at VF, GBG and SDG are big proponents of communicating frequently and extensively with employees about the "why" behind their 3D investments. They also share a healthy dose of flexibility when it comes to the "how" of rolling it out.

This flexibility is associated with a willingness to fluidly inject use of the technology where it is needed most. At VF Jeanswear, for example, 3D was put into play right away for a rush job on a merchandise line presentation and to resolve an array of time-sensitive



*The same pair of jeans is shown on a physical model (left) and 3D virtual model (center). Then at right is a view of 3D pressure mapping of how tightly or loosely the garment fits. VF Jeanswear teams use this information for making changes and interpreting consumer fit feedback. Image courtesy of VF Jeanswear.*

product development questions. "Very early on we had some quick wins with our merchandising group and management group when we were able to solve issues at hand quickly with 3D," says Garner. "Not only did we have a solution, we had a visual explanation."

Both VF Jeanswear and GBG have focused 3D initially on parts of their business that come under the greatest time constraints due to their fast-moving pace. For VF Jeanswear, this is the mass market female collection, and for GBG, it's the girls' line. "The timeline for our girls' product is so demanding," Lerias says. "It was almost impossible to get samples for it. So we got our creative teams involved with 3D, and now we don't have to go through physical sample after physical sample, losing cycle time."

Before, GBG's designers would create a sketch, its patternmakers would make a pattern, and then the China-based sample room would make a sample. When the sample circled back to U.S.-based designers for evaluation, it often required changes, and the process would begin again. The cycle usually carried on for three to four weeks until the sample was approved. Now, GBG's technical design department is able to show designers virtual prototypes of their styles on screen and work through the change process digitally. "When designers like what is on the screen, then we make the physical sample," Lerias says. "Our approval rate for the [physical] samples has gone up to 92 percent." ▶

Getting to this point was not easy. GBG devoted a lot of time and resources to set up its fabric and trim libraries in 3D and create digital models for virtual garments to be fitted on. With exacting precision, all textile characteristics and model dimensions have to be a one-to-one match with their physical counterparts. These intensive requirements, coupled with the challenges of major process change, can make it tempting to throw in the towel.

“The big problem comes when the initial excitement fades,” Lerias says. “That’s when most companies will have the hardest time.”

Ohlsson concurs. “Following all of the excitement, you can plateau a little, thinking, ‘Wow, this is more work than we thought it would be.’ You’re implementing 3D into your workflow and understanding just what you need,” she says.

To push through this tough phase, it is imperative to have the support of top management. This includes alignment and collaboration on vision, goals and plans between the executive sponsors and the stakeholders from discovery through implementation.

It’s also invaluable to have employees who believe in the 3D cause and are committed to making it work. “You need that commitment so that when you run into those bumps on the road, you can get past the hurdles and push this movement forward. And it is a movement — this will become the future,” Lerias says.

While integrating 3D in their workflow, companies often uncover and decide to address all sorts of process inefficiencies and issues. “In trying to figure out how to take our process and do it virtually, it has brought to light some weaknesses in the physical process that need to be addressed regardless of whether we do it virtually or continue doing it physically,” Garner says.

GBG also benefited from putting its processes under the microscope during its 3D rollout. “We learned a lot about the inefficiencies that we had before this technology,” says Lerias. “It was a very good eye opener, and it forced us to make changes.”

At SDG, the transition to 3D highlighted some limitations of the 2D designs it had developed over the years. “They had no basis in actual fit,” Schnitker says. “Fit typically occurred in a separate stage with the product development and technical design team. This presented challenges with some clients who felt the representation of the image was too slim or too bulky, and that slowed the adoption process.”

Now with its 3D solution from Browzwear, the process incorporates garment patterns right from the outset, so SDG is able to discuss technical styling and specification issues with its customers at a much earlier stage. “I believe as we continue to progress, it will reduce the actual fit process dramatically as clients feel more comfortable with the virtual world view,” he says.

As companies like SDG look to what’s next, they share their vision with 3D technology partners so that together, they can look beyond exploiting what’s available now to finding a strategic technology partnership that explores the future.

### Enjoying the Benefits

Having established that 3D takes tons of hard work, commitment to organizational change, financial investment and process re-engineering, what bang for the buck does it deliver to make it all worth it? SDG doesn’t take this question lightly. “We set the bar pretty high: The experience should be ‘mind blowing’ for our clients and greatly speed our processes to maximize the efficiency of our employees,” Schnitker says.

### How has SDG benefited from 3D?

#### SCHNITKER LISTS THE WAYS:

- Customer satisfaction and confidence
- Production satisfaction and confidence
- Increased revenues
- Rapidly expanding customer base

#### AT VF JEANSWEAR, 3D HAS YIELDED:

- Reduced physical prototypes
- Increased quality of product design due to greater experimentation, fit improvements and development rounds within the same period of time
- Learning opportunities for junior pattern makers and designers
- Time savings
- Eco-friendly processes due to reduced consumption

3D’s ability to buy time for apparel businesses is significant. For example, at VF, one patternmaker can make 10 to 20 virtual changes or corrections in a single day. It could take one to two weeks to do a single round of physical corrections. VF also is leveraging 3D to create some special quick-turn collections that need to be released within a month.

#### FOR GBG, 3D HAS:

- Reduced sampling time
- Decreased the number of prototypes
- Enabled better communication globally
- Improved environmental sustainability
- Helped associates complete their work on time

In summary, the benefits of 3D are ultimately about innovations that allow: (1) companies to be better stewards of the earth’s resources; (2) employees to be more productive in their careers with less time spent fighting fires, which means more personal and family time; and (3) more clear communication and effective collaboration with colleagues, partners, vendors and consumers. ■