



Hoka One One running shoes. It was for this brand that Chris Hillyer's team produced its first digitally designed prototype.
CREDIT: HOKA ONE ONE/DECKERS

More to 3D than printing shoes

The director of innovation at footwear group Deckers, Chris Hillyer, has said the wider fashion industry, comprising shoes, apparel and accessories, is late to the party with regard to using digital 3D technology to design products and produce samples. "It's been around for 40 years," Mr Hillyer says. "Cars, aeroplanes, even toothbrushes have been designed in 3D for a long time. Shoes, apparel and handbags are the last to embrace it." But he describes the software now available for 3D design as "extremely powerful" and says it is becoming much easier to use. "This is making generative design possible," he explains, "and generative design is a revolutionary new way of creating products. Everything you come across in the world will be influenced by this. It's the future of how things are going to be made."

Faster, cheaper

He offers an example involving Deckers running shoe brand Hoka One One to illustrate the point. A 3D-printed sample shoe made from gypsum was one of the first the group's design team produced using 3D technology and the savings in time and cost made a positive impression. "The old school

Deckers director of innovation, Chris Hillyer, says the term '3D' now makes some in the industry think of "magic 3D-printed shoes" that may or may not have an impact on the footwear sector in the years ahead. But he says software for designing product and making prototypes and lasts in 3D has been around for much longer and is now so good most companies could make use of the technology right away.

way of producing the sample would have taken us at least 12 and perhaps as many as 24 weeks," says Mr Hillyer, "and the cost of the sample would have been around \$2,000. Using Romans CAD software, it took us between two and four days



Deckers innovation director, Chris Hillyer.
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to make the Hoka One One sample and it cost us around \$300. It used to take 47 weeks from having a first discussion about a possible new product to having a sample to show in a sales meeting; not to have it in production, just to show it in a sales meeting." In the face of improvements such as these, he feels everyone in the footwear supply chain should take notice and he insists that the last thing anyone should ever say in raising an objection is to say the old way 'is the way we've always done things'.

Agility required

After 20 years at the group, he has spent the last two years co-ordinating Deckers' move towards digital design and for him, this is all about agility, which is of great importance in an age of what he refers to as "total team development". This means footwear groups need a whole team of people working together on the development of new shoe collections, with those who know about materials, about construction, about corporate social responsibility and so on all making their contributions. And improvements in the software are helping too. "The software is extremely powerful and becoming much easier to use," the Deckers director says again. "There are certainly some people who are scared of what this might do to their careers and teaching them about it requires a soft touch, but we're talking about 3D design and that's a different animal from 3D manufacturing. Some people take to it very quickly. With Romans CAD, you can bring a digital last onto the screen. It's like 3D photoshop and



The UGG design team, under pressure to come up with new products to cement the success of the brand's famous boots, has had the benefit of Deckers' new 3D design expertise.
CREDIT: UGG/DECKERS

it becomes fun because you can play around putting different materials and colours onto that model."

No magic solution

Mr Hillyer's efforts over these last two years have centred on an internal incubator project that he has set up, starting simply by hiring some talented young people, buying a materials scanner and running a few pilot projects. At first, this often consisted of helping the UGG team ("a gigantic part of our portfolio") in its preparations for important meetings. UGG's success with its reversed sheepskin upper boots needs no explaining, but the brand has been working for a number of years to increase its portfolio of products to help it build on the boots' success. He gives the example of UGG colleagues running short of time before an important meeting and preparing to go in with just a sketch of a new idea. "We were able to create a photo-realistic rendering for them to take instead," Chris Hillyer says, "which was much better than a sketch."

This work continues, but he says the reputation of the small team that focuses on building up skills in 3D design and lasting software for the group are becoming well known within the Deckers design community, with big hitters now asking the young members of Chris Hillyer's team to have lunch with them and explain to these more experienced design colleagues how the technology works. "It is just a tool, of course," the innovation director says. "It's not about making magical 3D-printed shoes. This is about using a tool to help us make better decisions." 📌