



A wide world of shoes. Population growth means the footwear industry may soon have to find a way of producing an extra 3 billion pairs a year.
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The world needs more shoes

Footwear technology provider Lectra has launched a new release of its Romans computer aided design (CAD) software application, driven by the industry's constant need to innovate.

The application first came on the market more than ten years ago and this latest release is version 9. Lectra's headline claim for it is that it can make the process of producing samples for a new collection more efficient, but without constraining a design team's creativity.

The principal way in which it does this is by taking sketches from designers and turning them into digitised, three-dimensional files that a production team in Asia or senior management colleagues in North America will be able to see just by opening an attachment to an email. The whole operation will

become faster as a result and involve far fewer long-haul flights.

The promise of being able to deliver these efficiencies without compromising the designers' desire for self-expression hinges on the software's new ability to scan 2D sketches and make them 3D computer files instantly. Designers will be able to continue to do what they have always done, which is to work in 2D with their drawings—the software carries out the conversion, and the creativity can continue. As indeed it must.

Lectra's director of footwear and accessories, Pierre Bonnet, believes this need for new styles will only intensify in the near future. He quotes a figure he picked up from testing organisation SATRA that put global footwear consumption in 2005 at 14.5 billion pairs.

Painting by numbers

"It's quite interesting to analyse the numbers," he says, "looking at annual shoe consumption versus the world's population. If we average just over two pairs per person a year then we already need to produce 15 billion pairs annually. But over the next three years, as the population increases, we'll need 3 billion pairs more every year. Do footwear producers imagine they can make an extra 3 billion pairs of shoes a year through organic growth, or would they be better off using new technology to respond better to the market need?"

Coming from Mr Bonnet, this is a rhetorical question, but he immediately offers four thoughts that back his conviction up.

First, he insists that the global footwear industry requires fewer samples. Yes, it does need more design input, but with less development cost. Then he says the industry needs to reduce the time-lag that exists at the moment between coming up with a concept and manufacturing a shoe from it. "This can take as much as 18 months," he continues, "even for the bigger companies. A casual footwear brand will probably have two collections a year, meaning it will take less time over this, but even six months is a long time."

His third point is that shoe companies are likely to be able to meet increasing global demand only if they are able to work on a collaborative platform, sharing accurate data with partners in various countries. And, lastly, he says brands must try to find a way of retaining the technical knowledge that flows through their organisations. Software can help them.

Detailed explanation

Explaining the first of these points in more detail, Mr Bonnet says: "Design is a key process, but the way to create design now is faster, with computers, digital images and so on; you can share your ideas instantly."

And he points to the high cost of prototyping and sampling in a large company. Taking a theoretical example, he suggests that a company might produce 1.5 million pairs a year, in two collections, from 300 prototype pairs and 100 models a season. The prototype and models will go to customers, so Mr Bonnet imagines that the company will easily have to produce around 3,500 sample pairs a year at, perhaps, EUR 30 per pair, possibly more. Then there is the transportation cost to add in, which, could easily be EUR 10 per pair at the very least for air freight, and possibly as much as EUR 50 in some cases. You also have to factor in management costs for controlling these two collections a year.

"My total estimated cost is EUR 230,000 a year," he explains. "The new method, using the software, could save you money. If you use collaborative development, you can show more products, more samples, reducing the time it takes to have new models from ten days to two, which could even earn you extra business, or help you enter new markets. This is a globalised industry, so we need global solutions."



Software is the key to increasing supply, according to Lectra, but not at the expense of hands-on input from designers.

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It is footwear's globalised status that will make it possible for it to cope with the demand to make billions more shoes every year. He believes more shoes will come from factories in Brazil and Mexico, and the industry will also continue to grow quickly in India—in terms of production and consumption. He thinks keeping design in Europe and production in developing countries is the answer.

Need for knowledge

Cliff Taylor spent 15 years at footwear brand Clarks before joining Lectra in January as a senior business development manager. His view is that companies have been forced to share data and work with external partners for years, at least since the start of this



Future success could hinge on a brand's ability to share around the world the work involved in coming up with a design and using it to produce shoes.

century, and he says that, since 2005, he has been using the term "knowledge-driven development" to describe what is going on.

As globalised production spread, footwear companies began to generate huge quantities of data and started trying to find the best way to share it quickly. Then, after only a few years, a huge bank of data had built up and companies began to find it difficult to keep track of it all. Information about a last they had used in a previous season, for example, often became very hard to find.

"It's the same as saying that, after you've captured the information, the problem is visibility. The entire team at your brand needs access to it, and CAD can help. It can hold the information and provide an interface to it. CAD is about communication, about getting your specification to the people that need to see it."

He makes the point that he used to face a wait of three weeks from sending the dimensions of a last to Brazil and getting the last built. "Now you can do that within a day," he says.

Mr Taylor insists that designers continue to be important—there is no suggestion that a software package could replace them by making it possible for anyone using a computer to design shoes. "Designers are, and will continue to be, important," he says.

"What comes out of their heads is what makes a brand a brand."

Production, however, is another matter altogether

Pierre Bonnet believes that, in future, there will be many countries in Asia that are able to produce good shoes. For him it depends on two things: the quality of the training available and the climate. "You need to have good working conditions to do a good job," he says, explaining the less obvious of these points. "If it's too hot it's hard to have the discipline you need to keep the factory running. You have to have discipline."

Discipline does not just depend on climate, of course, and the Lectra director goes on to say that he thinks workers in many Asian countries—including China and India—are better at respecting discipline than their counterparts in the developed world.

"You ask someone in France to set up a footwear factory in France, employing 20,000 people," he says. "Even if you can find 20,000 people who say they are willing to do the work, you won't be able to manage them."

The future is sharing the work involved in putting shoes on the feet of the growing global population, sharing it around the world. He says this is part of what globalisation means. 🌐