

## Steaming ahead

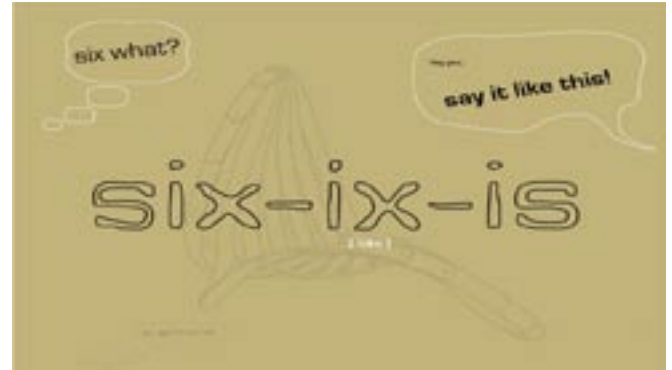
Three design graduates are showing just how much it's possible to achieve with innovative ideas, limitless enthusiasm and the kind of hands-on support that's available to new businesses in Cornwall.

### Overview

The young designers behind Sixixis are using wood in ways that you might not have thought possible. Imagine, for example, a spherical summerhouse that you could literally roll between different positions in your garden. Or a chaise longue constructed from thin strips of ash curved in ways that bring to mind the impossible objects of Max Escher.

The process that allows these strangely beautiful yet highly functional objects to take shape was initially developed by Tom Raffield while studying for a degree in 3D Design for Sustainability at University College Falmouth in Cornwall. "I was interested in the possibilities of bending wood," Tom explains, "but frustrated by the restrictions on what you can achieve using conventional techniques. So I started trying out new methods of steam-bending. What I came up with is a 'steam-bag' concept, where you focus on one section of wood at a time. This allows you to do each bend independently at different times and gives much more flexibility in design terms."

Together with fellow design students Charlie Whinney and Chris Jarratt, Tom decided to take the idea forward after leaving college. The team landed commissions to create first a tree house in Cornwall and then a "rolling summerhouse" for a client in Dorset, based on a highly original design by Charlie. "It's basically a four-metre sphere made out of green ash and oak, constructed on a grid-shell system using



thin sections of wood. By building double or triple layers with struts in between, you can create incredibly light but strong structures."

While working on the summerhouse the team moved to Dorset, but they were keen to get back to Cornwall to build the business. "It's not just the lifestyle, though that's obviously a great bonus," Tom says. "The overheads are much lower than we'd be able to find elsewhere, and I don't think there's anywhere else we could have got quite such a high level of business support." Cornwall also offers supplies of the wood used in the company's designs, which is all sourced from local foresters.

In 2005, Sixixis were offered business incubation facilities at the Combined Universities in Cornwall (CUC) campus at Tremough, and with the help of Cornwall Pure Business they also managed to obtain workshop space in Redruth. "It's perfect for us," Tom says, "especially as we've been able to customise the space to our needs. The building is run by the Cornwall Arts Centre Trust, and is full of other people working in different creative fields - which makes for a really buzzy atmosphere."

Getting the company off the ground has been a challenging but exhilarating process for Tom and his colleagues: "It's all new to us, and we're still learning so much every day - not least from our mistakes!"

### Workforce

At present the Sixixis team comprises the three founding designers, but the company plans to take on more staff to work on the production side as it scales up its operations.

### Technology

As well as enabling the creation of some astonishing 3D forms, the steam-bending and clamping processes used by Sixixis are much more cost-effective than conventional techniques, partly because they allow the use of cheap and plentiful "green" wood that does not need to be seasoned. They also avoid the environmental problems associated with competitor processes such as laminating, which typically use toxic adhesives and are very labour intensive. Access to CAD-CAM and laser-cutting facilities at the CUC campus has been instrumental in these technical achievements, and the CUC business support team has also enabled Sixixis to benefit from free legal advice on patenting its processes.

### Clients

So far, most of the company's work has consisted of private commissions for individual clients. But Sixixis is planning a major marketing push from spring 2006, aiming to place its products with buyers for retail outlets in the UK and Europe. This will involve a trip to the Milan Furniture Fair (supported by the CUC business relations team) as well as a stand at the London Design Week exhibition in the autumn.

The company's products are already causing a stir in design circles, and were recently featured in a three-page designer profile in *Architects' Journal*.

### Support

"None of us had any real experience of running a business," Tom says. "So we feel very lucky to be able to draw on all the support that's available in Cornwall to people with good ideas to develop. Being based here means we've been able to access a lot of funding through Objective One-related sources, as well as from Defra. The Sylvanus Trust has also been brilliant, putting us in touch with all sorts of useful contacts, helping us source wood and giving us a grant to help us get professional advice on taking our products on to the production stage.

"Cornwall Pure Business, Tom says, was "the stepping stone that made it possible for us to locate in Cornwall and take the business forward." Describing how Sixixis was assigned a dedicated Cornwall Pure Business adviser, he says: "The advice that Rachel has given us has been absolutely spot-on. She's helped us with so many different aspects - dealing with potential investors and finding premises for instance. She even came along with us to several key meetings and gave us follow-up advice afterwards. We certainly wouldn't have got this far without her help - or if we had, it would have taken us twice as long!"