THE NEXT STEP

HOW AMBITIOUS BUSINESSES CAN ACHIEVE THEIR POTENTIAL



INEVITABILITY AND OPPORTUNITY

Interview with Simon Chandler, Founder Director CREAT3D

COMMISSIONED BY



A report commissioned by SAS Specialist Accounting Solutions considers the biggest challenge for any independently-owned company which has the potential to go further.

The ability of the owners to scale the business.

In their own words, directors talk about the issues they are having to address and how they want to achieve their goals.

The interviews will be brought together as a report to be published by DECISION magazine and then as a digital book.



Why did Simon Chandler decide to start his own business? A potent combination of inevitability and opportunity.

"I always wanted to set up my own company. I just didn't know how or when or what," explains the founder / managing director of CREAT3D. "I was working in sales when I saw a customer using additive manufacturing. I was fascinated by it."

Let's pause for a brief explanation of what he's talking about. The media call it 3D printing, but additive manufacturing is best described as the opposite of the conventional way of making things. Since the Stone Age, when neolithic man hacked off bits of wood to create a spear, making things has been subtractive. This new technology works the opposite way. Instead of starting with blocks of metal or plastic, a product is built up layer by layer, starting from absolutely nothing and controlled by software.

So back to Chandler and CREAT3D. "Some fifteen years ago," he recalls, "the University of Bath developed a low-cost machine which would 'print' most of its components to actually replicate itself. But I couldn't see that companies would want to make their own machinery. Then in 2012 the first 'printers' aimed at the enthusiast began to appear, and I thought this was the time to make a move to become one of the first additive manufacturing solution providers."

His gameplan? Chandler laughs. "I just wanted to run my own business, that was the extent of it," he says. "I started in the dining room and took on premises when virtually the entire house, including the bathroom, was full of stock."





Simon Chandler

How, though, was he able to talk authoritatively about additive manufacturing? Because he'd already spent time not just studying the technology but visiting manufacturing plant to learn about processes and supply chain.

"My driver was to enable engineers and manufacturers make their businesses more efficient," he explains. "In the UK, there has been a productivity crisis over the last couple of decades, and additive manufacturing can address that. The key thing when you start a business is that you need to remember that you have two ears and one mouth, so if you let the customer talk, you'll learn not just what their requirements are but how you might need to present things differently."



But Chandler soon discovered that didn't necessarily equate to being welcomed with open arms. "Because this is a new technology, companies won't have an existing set of buying criteria, so I had to be able to identify and understand their challenges and find the sweet spots. Sometimes, in traditional, established sectors, it helps to have fresh eyes showcasing how something can be achieved differently, especially a way that is cheaper and faster."

He does have some reference points. A manufacturer was making small batches of security equipment - two to five items at a time using a combination of CNC milling machines (which required specialist programming), injection moulding (expensive to set up), as well as working with hand tools (with a reliance on skills which aren't taught any more). Now with additive manufacturing they can produce a one-off as cost-effectively as a batch, and even alter the design effortlessly per item.

On the production line, a car maker needed to lift the bonnet of each vehicle and hold it in place at a certain height for a part to be fitted. Made of nylon, the bonnet stays have a limited lifespan before their accuracy diminishes; each would cost £400 to replace. Today, the company 'prints' them in house at a cost of £20 a time, as and when they are required, instead of having to buy in a batch of them.

"Multiply that across their sites worldwide and you can see the savings that additive manufacturing will bring," says Chandler. "What we are looking at is flexible, on demand manufacturing.

"So our biggest challenge to adoption is education, and the need to evangelise is a real effort for an SME. We're in what you could call the chasm of despair, that place between having early adopters and trying



to reach the mass market. And this is the opposite of a commodified purchase. We provide the hardware, installation, training, a support engineer, and then maintenance and consumables."

The worst thing, Chandler believes, was when the press described additive manufacturing as 3D printing - because a printer in the guise of a computer peripheral is considered to be an off-the-shelf purchase made on price.

Market penetration is already 3% to 5% in manufacturing, according to Chandler, which might be a surprise, although an increasing number of every-day products such as most hearing aids are now made using the new technology. Chanel use the technology for making their Revolution mascara brushes; Dr Scholl produce customised insoles using the technology.

Sometimes, what might appear at face value to be a natural adopter turns out not to be a prime prospect. "I contacted architects because



CREAT3D showrooms



they make models for each project, but their method is to take the fullscale digital design of a building and shrink it down in order to print out and then model," explains Chandler. "That doesn't suit additive manufacturing because shrubbery or people in front of the building come out as tiny blobs."

It was in 1986 that additive manufacturing was invented, and Chandler says that its progress mirrors the adoption of computers. In the same way that IT moved from mainframes to the desktop, additive manufacturing no longer requires the investment of £1million in a 'printer'. Today a £50,000 machine can do 80% of its functions.

"I know there are companies out there which would engage with us if we were in touch with them, but finding good sales people is still hard," says Chandler. "I'm more than happy to bring in people from outside manufacturing if they have a passion for engineering, because we can balance their skills with the more directly experienced technical people in our team.

"But it's really important that a growing company, desperate to fill positions, is even more selective. Just because the candidate sitting in front of you can do the job, you still need to do the due diligence; as well as their skills and experience, do they have a thirst for knowledge, a desire to progress? If they haven't, it isn't going to work out for us, and the impact of that on a small, independent company can be colossal."

Not that Chandler is reluctant to make the next step. "When you start your own business, your role is to do everything, which incidentally is a fantastic way to learn," he explains. "It means you've done every possible job and you're not worried about bringing someone in to do a





particular task because you know from direct experience what it entails. But you need to make key appointments if you are going to be freed up to devote more time to your core strengths," he explains.

"I'm patriotic, and I want to help enable manufacturing in this country to succeed. I find having that sense of purpose inspiring. As a country, we off-shored so much production, and while additive manufacturing is a means of bringing more of that back to the UK, Covid-19 has also demonstrated the necessity of doing so because of the fragility of supply chains stretching across the world."

There's another driver. "Global supply chains are awful for the environment," muses Chandler. "If I've designed a new type of comb here in the UK, and I have the product made in China, the minimum order could be 200,000. It's shipped across the world, transferred to a warehouse and then to distributors, and I might not sell all of them. It's completely inefficient, and a lot of capital is tied up in the whole process. If the design of the comb is held in the cloud, then when a distributor, or even the consumer wants to buy one, they call it off and the comb is 'printed' on the customer's premises on their own machine or at a local 'printshop'. If it's a gift, the recipient's name can be added with no impact on the cost or time.



"It means we can have localised, on demand, bespoke manufacturing - my heart says it will be the norm in five years, but realistically it's probably going to be fifty."

That bigger picture is a reason why Chandler isn't concerned about there being more competition in terms of providers in the future. "A rising tide raises all the boats," he suggests. The important thing for a company in CREAT3D's position is to keep innovating. "The great thing about selffunding growth is that you aren't answerable to outside investors, and because this is new technology, the adoption rates mean we can carefully manage cashflow rather than risk over-trading," Chandler explains. "After every demonstration, the potential customer is fascinated by what they have seen and the potential for their business, but if they won't commit, we know they will in a year's time, so it's about being patient."

But that doesn't make it easy when he's trying to appoint sales people. "Their view is shorter term than that, and younger people don't have so much interest in sales as a career," he senses. "I'm not sure they have the resilience to keep knocking on door after door before finding someone who is prepared to buy.

"So we operate with the minimum of admin, which we have achieved by outsourcing HR and IT and making sure our systems are integrated. Processes need to be scalable from day one, so it doesn't matter whether the business has ten customers or ten thousand, the platform works. It's more expensive and takes more time to do it this way, but then you aren't having to back-fill when the business is really growing at pace. Trying to rectify something then, will take longer and cost more than if you had got it right in the first place."

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Report researched and published for Specialist Accounting Solutions Ltd by **DECISION magazine** www.decisionmagazine.co.uk

