

3D printing's next steps

Stanford Marsh is cutting through the hype of 3D printing and addressing the challenges of BIM for manufacturing

Our customers tell us that their main challenges today are to reduce costs and find innovative ways to compete within their markets, to increase productivity and provide a rapid turnaround. It's those challenges that 3D printing and being BIM compatible can add real value to your business.

Stanford Marsh Limited have been providing Design Office solutions since 1965 and throughout their 50-year trading have helped customers choose the right tools to get their designs conveyed, products manufactured and to save money. So when 3D print became a part of their line-up over seven years ago, it was easy to get caught up in the hype surrounding the technology and it took time to cut through the headlines in order to demonstrate to their customers the true business benefits for 3D print.

To some extent that remains the case still, as headlines continue to focus on wacky applications and/or the commodity hobbyist market.

3D printing continues to be utilised mostly for rapid prototyping, proving concept, design intent and fit, form, function early on in product development. Making changes and iterations at vastly reduced costs, within hours for what would have previously taken weeks. Getting product to market far sooner and resulting in sales ahead of previous timescales and in advance of the competition.

You could say it's a given that designers and engineers now understand the benefits of 3D print for rapid prototyping and are seeing the benefits firsthand, but what lies beyond? Stanford Marsh are seeing a significant increase in customers using 3D printing for manufacturing

of end-parts, as well as jigs, fixtures, drill guides, injection moulding and soluble core applications, in many cases producing complex parts otherwise impossible to make using conventional manufacturing processes.

Stratasys' association with Airbus has been well documented already; an A350 XWB aircraft with over 1000 printed parts in operation, using ULTEM 9085 resin for FDM. The significance of this case-study goes to show how Direct Digital Manufacturing (DDM) will only continue to grow, as 3D Printers become faster, further materials become available and people realise the applications for DDM within their own business.

Closer to home, Stanford Marsh 3D Print specialists (SMG3D) are working with the prestigious Malvern based motor company Morgan within their Special Projects Division.

- Reduce Custom Design Enquiries.
- Market your products through BIM Online catalogues.
- Increase after sales through readily available BIM information.

www.cadspec.co.uk



Cadspec Limited, the CAD division of Stanford Marsh Group, who are an Autodesk Gold Partner established in 1989, are helping manufacturing companies to get ahead in Building Information Modelling (BIM).

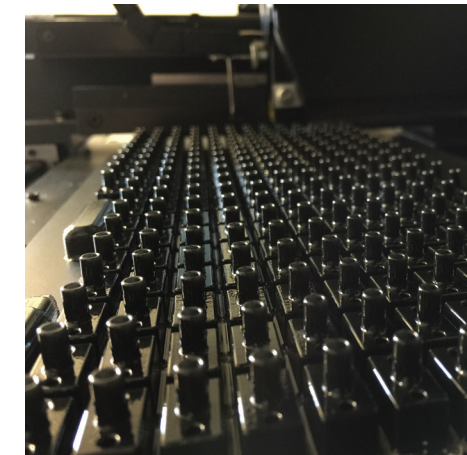
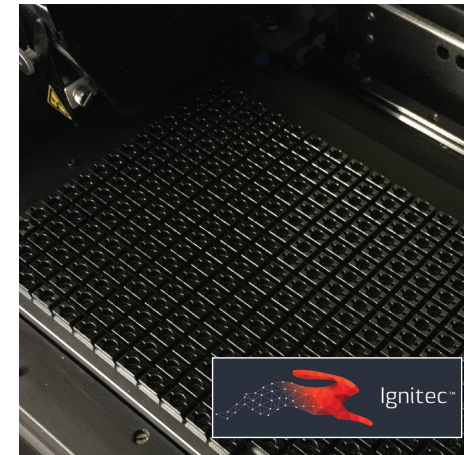
With manufacturers increasingly being asked for BIM data, it is becoming essential that they create Revit/IFC ready models, and ensure that they are distributed to existing construction customers and more importantly, expand their services.

Being able to offer BIM ready content will

almost certainly be a major plus point for manufacturing going forward. Providing or not providing such information could become a key differentiator in sales to the construction industry.

CADSPEC BIM for Manufacturing caters for the changing requirements of your customers but also increases your company sales by helping your suppliers choose your products over those of your competitors.

- BIM for Manufacturing will differentiate you from your competitors.



Left | Ignitec used Stanford Marsh's 3D printing expertise for cost-effective low-run manufacture

Below, left | The Morgan motor company worked with Stanford Marsh on the 3D printing of certain parts

Morgan initially trialled a Stratasys uPrint system, which later lead to the installation of a Stratasys Fortus 250. Initially the trial was slow going, as

it wasn't apparent how 3D print technology could be used within their traditional business. However, as part of the development and



now production of the SP1, Morgan have used 3D printing for the manufacture of parts and later found added benefits for jigs and fixings: a reflection of both Morgan's willingness to embrace the future, whilst remaining constant to its coach-built craft roots. The SP1 truly celebrates the blend of craftsmanship and technology that Morgan is so famous for.

Another client, Bristol based Ignitec Product Design, have multiple applications for 3D printing. One such project has seen the production run of 200 parts for less than 20% of the cost of injection moulding at the same volume. This was down to the high upfront cost of injection moulding, tooling and setup, which can run into thousands, versus 3D printing which has no such costs. Their Objet 3D printer was able to print more than 300 units simultaneously in a single print run, with cycle time of just 2-hours, well over 1000 units a day were now achievable.

New possibilities for 3D printing are being discovered each day. We are always surprised to see customers finding new applications and challenging the boundaries of additive manufacturing. We have no doubt, those that adapt to this technology and get familiar with it now, will have a distinct competitive advantage over their competition. The question is do you get involved now, or play catch up?



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