

Dimension 3D Printer Helps Build Success at Paul Davis + Partners

London-based **Paul Davis + Partners** is an established firm of architects and urban designers. It has designed both commercial and residential projects across London, the Far East, Hong Kong and Russia. Founded over thirteen years ago, the firm's flagship design is the Duke of York Square off the King's Road in Chelsea, London. It is the first largest new public square in central London for more than a century.

By the nature of its industry, Paul Davis + Partners is busy juggling multiple projects and time constraints are often an issue. Its clients are demanding more projects to be turned around at an increasing pace, which means that the firm had to reassess some of the ways it was working to meet deadlines. For example, until quite recently, the more traditional methods of hand-made cardboard or balsa wood models were being built at the end of the design process so as not to hold up the project. Having visual models available only at the end of the process meant that most of the projects were relying solely on drawings and therefore missing many of the benefits that 3D models could offer.

"It is much more beneficial for 3D models to be used throughout the design process in order to assess the structure and shape of the building. A tangible model can help us to determine where sunlight will hit the building, for example, and to consider the spacing between buildings, ensuring that the client and architects are both happy with the end result," said David Hoggard, partner and architect at Paul Davis + Partners.

Outsourcing its model-building was one option the firm explored, however past experience had shown this method to be too costly and less flexible than having their own facilities in-house. Instead, Paul Davis + Partners turned toward technology and made the choice to invest in a 3D printer which would easily produce a highly durable model in a matter of hours, rather than the days or weeks that it would take to build one by hand.

The Dimension Solution

The firm selected the Dimension SST 1200es 3D Printer for its precise detailing and use of ABSplus™ materials. The other solutions they looked at, did not have the high quality material properties or accuracy that the Dimension printer offered.

"I'm constantly amazed at how good the printer is and the detail it can achieve. We weren't quite prepared for the results it can produce. The implementation process went smoothly, delivery of the printer was taken in the morning and by lunchtime, it was up and running with only half an hour of training time required."

— David Hoggard
Partner & Architect,
Paul Davis + Partners



Since its arrival in May, the Dimension printer has been continuously running, with the exception of one week's rest. It has enabled models to be constructed throughout the design process, helping Paul Davis + Partners to be more creative and giving them the freedom to test their designs throughout the initial phases of the projects. There is no substitute for the tactile and visual feedback a physical model can provide – and with a Dimension 3D printer the company can create both simple and complex models in real space and proportionately scaled.

Hoggard explains: "The printer has saved us a huge amount of time and has given us the opportunity to take on more projects. It recently made a project in the Far East possible for us. We were asked to come up with a design and produce a 1:500 model within the space of four weeks. It would have been impossible to meet the deadline without the Dimension printer as outsourcing to a model making company would take two weeks as a minimum. Using the Dimension printer is like having an extra member of staff."

Hoggard continues: "Our clients are giving us less and less time to develop projects and in the Far East, they tend to work 24 hour days, so UK architects have to be incredibly efficient to compete. The Dimension 3D printer allows us to communicate and collaborate without ambiguity and the ABS models enable everyone to review concepts accurately."

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The Dimension 3D printer is a good illustration of Paul Davis + Partners investing in new and innovative technology and is proving to be a good method of recruitment for the firm. It helps to attract young architects who see the potential that the technology can bring to the industry. In the future, Hoggard aims to keep the printer as busy as possible, changing the culture of the office to use the printer rather than keeping designs on paper, which will allow Paul Davis + Partners to continue to grow its business.

Hoggard concludes, "Eventually the Dimension 3D printer will overtake the cardboard model. In a few years' time, more and more companies will have one and if they don't, it will be like walking into an office and there being no photocopier."

An essential tool for everyone on the design team. Dimension 3D printing can help you quickly fine tune designs and cut weeks – even months – from your development schedule. Now you can test form, fit and function and explore as many design iterations as you like – over your network, right from your desktop.

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