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Global 3D printing market expands by a third

By Tanya Powley [Author alerts](#)

The 3D printing market grew by more than a third in 2013, as more companies adopt the innovative technology in the hope of bringing down costs.

The global products and services market for 3D printing, which is used to make everything from plastic figurines to complex parts for jet engines, rose 34.9 per cent to \$3.07bn, its highest growth in 17 years, according to a report by Wohlers Associates, a 3D printing consultancy.

It comes as an increasing number of the world's biggest industrial groups, from [General Electric](#) to [Siemens](#), use 3D printing, also known as additive manufacturing, as a means of speeding up production and making more lightweight, complex and cost-effective parts.

"The industry is experiencing change that we have not seen in 20-plus years of tracking it," said Tim Caffrey, senior consultant at Wohlers. "What's most exciting is that we have barely scratched the surface of what's possible."

3D printing has been around since the 1980s, when the technology was first used to make plastic products. In recent years the technology has advanced, however, so that companies are now able to build complex shapes from metals, such as titanium or aluminium, by using lasers to melt metal powders.

Companies have mainly used 3D printing to make prototype parts and products for testing. But several of the world's biggest manufacturers, such as GE, [BAE Systems](#) and Siemens, are leading the way in moving the technology from design shop to factory floor.

Siemens is already using 3D printing to make spare parts for gas turbines, while in January, BAE Systems, the defence company, said its RAF Tornado fighter jets had flown the first metal 3D printed flying part.

GE is using 3D-printing machines to make fuel nozzles for jet engines. Those fuel nozzles used to be made up of 18 different parts but now comprise one single piece, making it up to 25 per cent lighter. By 2020, it expects to have made 100,000 3D-printed fuel nozzles.

British medical businesses, from dentistry to orthopaedics, are already using the technology to design highly personalised products.

However, some are sceptical that the new technology could soon become threat to traditional manufacturing. Some of the main factors holding back mass 3D printing are the costs involved: machines and the cost of the metal materials are high. Another problem is machine capability, limiting the potential use of the technology for mass production.

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