



# FOUR WAYS 3D PRINTING WILL DISRUPT LOGISTICS



The revolution of 3D printing has been transforming many industries, with recent developments in aerospace, manufacturing, health and even the food industry there isn't an industry untouched by the technological development of additive manufacturing.

It was recently announced that the world's first 3D printed homes would be built in a town in the Netherlands and there have also been many news reports of other impressive developments. Machines are becoming increasingly capable of printing, cooking and serving food items such as a burger, as well as major developments in the health industry including, which even include 3D printed prosthetic limbs.

Last year, Melbourne-based additive manufacturer Titomic unveiled the world's largest and fastest 3D printer and the Logistics Trend Radar, published by DHL, cites an annual growth rate of 13.5 per cent for additive manufacturing. As logistics is an industry that is primarily about moving products from one place to another, developments in 3D printing will change the way the industry works has to think and function.

Logistics & Materials Handling investigates how 3D printing is set to shape the future of logistics.

### 1. Reduced inventory

The ability to offer an on-demand product range leads to significant warehousing cost savings by eliminating or reducing inventory costs.

As supply chain is traditionally about the balance between offer and demand, by being able to create products upon

demand businesses will change how they approach their warehousing and logistics operations.

3D printing offers an alternative solution to having large stock levels and lead businesses to eventually restructure their entire supply chain.

### 2. Customisation

With consumers now wanting more control and customisation, 3D printing makes it possible for manufacturers to customise products for their customers. It will no longer be about standardised stock but manufacturers will be able to offer a more flexible model and will be able to offer people a made to order service. This has huge potential for industries such as automotive, retail and health.

### 3. Sustainability

With the ability to print on-demand and to required dimensions, there will be huge benefits for the reduction of waste, along with the environmental impact of not having to move small parts over large distances. For Titomic CEO Jeff Lang this is a great benefit for additive manufacturing. According to Jeff, as we have limited resources, this is an advantage that will be crucial in the future. The Titomic process boasts less than 10 per cent waste.

### 4. Last-mile shipping

If more products are produced and manufactured closer to where they will be used then last-mile shipping is likely to increase. Goods will no longer need to be shipped halfway around the world if they can be printed on-demand and closer the consumer. In addition, as customisation becomes easier volumes will increase and this may lead to more packages and delivery trips. While fewer products will be shipped from further away, 3D printing may lead to an increase in last-mile shipping. This could also lead to innovation in smarter more environmentally friendly ways to deliver the last mile such as bicycle freight, drones and electric vehicles.

