

3D printing opens up entrepreneurial opportunities

3D printing, which involves a printing device that layers liquids, powders and sheet materials together in a digital model to accurately create a three-dimensional final product, has the potential to change the way South African businesses operate, as well as introduce a new stream of entrepreneurs into the economy.

From a global perspective, this invention has already created countless opportunities for businesses to differentiate themselves from competitors, with 3D printing products and services expected to approach \$6 billion worldwide in the next four years*.



Christo Botes

Global success

Christo Botes, spokesperson for the Sanlam / Business Partners Entrepreneur of the Year competition, says that although this technology is still relatively new to South African shores, its global success highlights the many opportunities that local entrepreneurs stand to benefit from, should they be able to capitalise on this innovative method of production.

Botes also points to recent research compiled by Canalys, an independent analyst company that strives to guide clients on the future of the technology industry, which revealed that the size of the 3D printing market, including 3D printer sales, materials and associated services, reached \$2.5 billion globally in 2013 and is expected to reach \$3.8 billion in 2014.

"Originally used for the production of plastic prototypes, the application can now handle a range of materials from titanium to human cartilage, and can print custom products, such as phone cases and jewellery, to shoe prototypes and even house structures. It is also predicted that as the technology develops, these possibilities will only continue to increase."

Aiding small manufacturers

Botes adds that while the implementation of 3D printing is evident in many sectors, from architecture to aerospace and medical, more recently it has altered traditional manufacturing processes. "Generally, smaller businesses operating in the manufacturing industry have outsourced their model designs to specific suppliers, thereby remaining dependent on the supplier for both the delivery time and the quality of the specific product.

"However, the development of 3D printing technology now empowers businesses to create innovative, customised products with a faster turnaround time, and without compromising product quality.

"Given that 3D printing is only restricted by computer-aided design competencies and printer availability, the technology is increasingly becoming a feasible option for a wide range of enterprises, resulting in a relatively low entry barrier for many entrepreneurs wishing to start a business after noticing a gap in the market."

Improving sustainability of local printing industry

In terms of job creation, he says that 3D printing could potentially improve the sustainability of the local printing sector. "The new technology will force companies operating in the traditional printing industry to review and introduce new service offerings. This approach will not only create jobs, but maintain jobs in an industry that is facing discontinuation, due to the shift from print to digital."



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He advises that while 3D printing has endless possibilities, it is still in its early stages, especially in South Africa. "Local

entrepreneurs considering investing in the technology must ensure that they seek advice from industry specialists. Customer research is also vital as the general public and customers may be hesitant or sceptical to use a product manufactured via 3D printing."

He adds that change is inevitable and business owners are faced with this reality on a daily basis. "Over the years, business owners have witnessed the shift from traditional business methods to more modern methods; specifically the shift to electronic and online platforms, and soon the evolution of 3D printing. These trends reiterate the need for local entrepreneurs to consistently innovate in order to avoid becoming irrelevant in their respective markets," concludes Botes.

*Research by Wohlers Associates

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