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3D Printing – An Insider's Perspective

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Make Whale

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Abstract

The 3D printing market globally is still at its infancy, - or some might argue that there isn't really a market yet. The knowledge of 3D printing design is still largely limited to engineering design – not product design. At MakeWhale, we are constantly pushing the boundaries of the application of 3D printing technology to consumer products resulting in a beautiful mix of technology and art.

Author/Artist Bio

Siddharth grew up in Mumbai, India where he completed his Undergraduate and Master's Degrees in Management. After working in PR for the world's largest independent PR agency, he went for his MBA to Claremont Graduate University in California where he graduated in Strategy. Shortly after, he moved back to start MakeWhale. He currently resides in Mumbai with his wife. Learn more about Siddharth Sah's company MakeWhale here: makewhale.com

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Siddharth Sah

Global Scenario

The hype for 3D printing had reached dizzying heights by 2016, with articles coming out almost daily about 3D printing being utilized in various industries. From medical to food, 3D printing was everywhere.

And then, we suddenly saw some big names struggling. 3D printing stocks began tanking and some big, public companies went bust while others were bought out at low valuations.

While this can be confusing for outsiders (is it all that it's hyped up to be?), as someone within the industry, I can safely say that 3D printing is here to stay. What one must realize is that it is not going to be in everyone's homes anytime soon, as some manufacturers might have you think!

The 3D printing market globally is still at its infancy, - or some might argue that there isn't really a market yet. While 3D printing has been used in prototyping (automobiles, airplanes etc.) for almost three decades now, it has not really seen much development on the consumer side of things.

That being said, the rise in the number of 3D printing companies in 2016 and 2017 has been quite remarkable.

The market can predominantly be classified into three categories:

1) Prototyping companies

2) Printer manufacturers and/or distributors

3) Design companies

Fingerprint Cufflinks

These fingerprint cufflinks ensure that you are wearing the only one of its kind in the world! Typically, we have our clients using their spouses or children's fingerprints.

Lyrics Sculpture

This was gifted to a popular Indian singer and contain a paragraph of his most popular song.

It starts at the top and at the bottom, reverses and comes right back up. Such a design is only

possible using 3D printing

The first two types are by far the majority of the players in the industry. This shouldn't be a surprise in countries though, given the rise of open-source 3D printing, the availability of cheap printer parts and the sheer number of engineering graduates.

The third type – design companies, are few and far between. The knowledge of 3D printing design is still largely limited to engineering design – not product design. My company, MakeWhale, seeks to address this gap by focusing on design for 3D printing across various materials and processes (see MakeWhale.com).

<u>Confluence of Technology & Design</u>

At MakeWhale, we are constantly pushing the boundaries of the application of 3D printing technology to consumer products resulting in a beautiful mix of technology and art. All our products are in a way, pieces of art. They are unique and one-of-a-kind, with each product totally personalized for the client's needs.

We have seen amazing combinations of technology and 3D printing, such as using auto-generating code which designs products (within certain parameters) but ensures that no two people are buying the same design! Thanks to the zero inventory model that most 3D printing companies have, there are now no restrictions to how many designs one can have.

One can now see live renders of products that they are personalizing before buying, thanks to technology and whatever the customization and design might be, companies can 3D print them without a problem. It is enabling each customer to be an artist, a designer, and create a physical item for themselves.

3D printing has allowed crossover from different professions. For example architects have now become jewelry designers and are creating never seen before lines of jewelry. All the limitations that were there previously with regards to designs and Minimum Order Quantities (MOQs) are now not a problem anymore.

In places like Amsterdam, they have just constructed a 3D printed bridge which is a marvel of technology and design. China is now constructing buildings and the large airplane manufacturers are successfully using 3D printed parts in their planes. The possibilities for 3D printing are expanding and in the coming years we will more likely see 3D printing being applied across disciplines, becoming a truly interdisciplinary technology.

Ganesha

This modern take on the Indian God, Ganesha was 3D printed directly in metal. This design is not possible to make by hand or other manufacturing methods.

Birth Statistics Art

A popular gift to new parents, this customizable piece can be personalized in multiple combinations.