Free 3d printing and product development design and supply chain management term ...

Business, Company

There are creative and surprising applications of 3D printing. As the prices of this printing are decreasing and technology is getting accessible, it is becoming a part of different manufacturing, designing and development processes. It is never an alternative to mainstream manufacturing.

3D printing emerged as an alternative to prototype production in the early 1980s. Today, 3D printing finds its application in manufacturing and prototyping. Moreover, it is being used in many other fields like architecture, automobile industry, film industry, marketing, construction and aerospace. The technology is becoming common and its usage is becoming widespread. According to statistics of IDC the shipment of 3D printers will reach 283435 units by 2017 (IDC, 2013).

The reason of increased use of 3D printers is that the 3D images replace the prototyping. The designs created from these printers are realistic and an alternative to prototypes. The prototypes require a large cost to be produced as compared to the 3D images.

Many different companies are using 3D printers in unique and creative ways. They use these printers for product designing purposes. Different artists are using 3D printing technique to show their artistic work. Nick Ervinck has depicted the work with the power of 3D printer. This technology is also used in the medical field. Some evidences of using this technology for development of prosthetic limb in Africa have been found. Recently an internet based technology company has won an award for its wireless headphones selling over the internet. The credit for this achievement is attributed to the 3D printing. Many other companies are using 3D printing to make models and designs. Nike is using this technique and with the help of

3D printing they can make models in just 2 days. Previously this modeling process took more than 4 months. Moreover, this technology is also being used by Disney Pixar Company. This technique is used by many major companies. It is cost saving as well as it saves time. The clarity of designs produced with the 3D printers has made them more familiar with the marketers and advertisers. They are now advertising their products with the help of this technique.

3D printing also finds its application in supply chain management. It is speculated that this technology can transform the supply chain management of spare parts. Instead of maintaining large inventories of spare parts in warehouses, they can be produced when and where required. But the issue with additive manufacturing is that, its accuracy is compromised as compared to subtractive manufacturing or CAD designs. Moreover, production control in additive manufacturing is less as compared to the subtractive manufacturing that allow more control and monitoring over the production process. Subtractive manufacturing is costly as compared to additive manufacturing, but it allows more control and monitoring over the production process. In additive manufacturing, after hours of effort on any part, it could be wasted as the control is less.

The printing process with 3D printers starts even before they are used. The design phase is dependent on modeling process. There are different tools of modeling. For creating efficient designs and models, it is essential that companies master these tools. The use of 3D printing also involves a lot of training and skills; and is a long process. However, after acquiring the

essential skills, companies are able to print their designs anywhere in the world. They can transfer these designs without any hassle over the internet.

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