The impact of 3d printing on the world

Technology, Information Technology

How 3D Printing Is Changing the World

The innovative way to produce advanced new products, improve old products, and revamp business processes is 3D printing. “ It is a small evolutionary step from spraying toner on paper to putting down layers of something more substantial such as plastic resin, until the layers add up to an object.” Some companies that are striving to make this process more mainstream are: General Electric, who aims to create 85, 000 fuel nozzles for Leap jet engines; Boeing, who has already created over 20, 000 products for commercial and military planes; Ford, who has been using this technology since the 1980’s and creatively made an edible mustang from chocolate and sugar, along with 500, 000 vehicle parts; Nike, who has created cleats using the 3D printer; American Pearl, who creates jewelry for all occasions; DIY Rockets, who makes pocket rocket motors; Hasbro, who creates children’s toys such as My Little Pony, Playskool, and Sesame Street; Hershey’s, who prints chocolate, of course, along with many other confections; MakeiLab, who prints customized dolls in London, allowing customers to choose each and every feature of their doll and print it to their liking; Matter. io, who wants to make 3D printers user friendly. Even top of the line 3D printing companies, however, are in for some competition with other firms. Firms with much larger budgets are just waiting to get their hands on this industry to do bigger and better things than are already being done. As probable wealth within the industry continues to grow, the 3D printing industry will soon become like Apple, who infiltrated the SmartPhone game last-minute and monopolized it. International 3D printing employees may believe that they are safe from competition, but indeed they are wrong, “ 3D printing is a

global technology now. The time to fortify their position and offerings is before the competition starts to pinch their market share.” The 3D market has grown rapidly and smoothly for the past few decades, but soon things will change, when global recession takes its toll. “ In a world still reeling from the global recession, everybody needs a competitive advantage, and 3D printing is near the top of the list for new technologies that can help businesses reinvent themselves. To make it to the next evolution of the market, current participants in the 3D-printing market will have to take active steps to stay ahead of the ever-growing pack.”

Some reasons 3D printing will revolutionize the way we produce items and enhance the firm are: many of these products will be able to be produced closer to its consumption, they will be produced locally, the products will be able to be easily customized because instead of having to pluck the product, printers will be able to customize using their internal software, “ Parts could be made at dealerships and repair shops, and assembly plants could eliminate the need for supply chain management by making components as needed”, China will no longer be the “ workshop of the world”. 3D printers in the future will be able to mass produce homes, cook food, manufacture weapons, and even medical supplies. Soon we will be able to replace broken items right within the comfort of our own homes using our very own 3D printer. No customer service calls, refunds, or hassle. “ 3D printing has the potential to revolutionize the way we make almost everything.” Stated Barack Obama. This could mean the end of shopping, as we know it, shoe printing could be completely customized, and even house building will be absolutely revolutionized. 3D printing could eliminate the use of assembly

lines and waste from manufacturing. The most interesting sector of 3D printing, to me, involves printing human flesh using “ Bioprinters” and “ bio-ink” consisting of living cell concoctions. Living human and animal tissue can actually be printed layer by layer! “ First, a layer of cells is laid down by the printer, followed by a layer of hydrogel that operates as a scaffold; then the process repeats. The cells fuse, and the hydrogel is removed to create a piece of material made entirely of human cells. This is transferred to a bioreactor, where the tissue continues to grow – as it would in nature – into its final form. While 3D-printed replacement organs are still some years off, scientists are already using this technique to print simple tissue, like skin and cartilage.”

3D printing is just another way our world is being reformed and changing for the better. The countless advantages of this industry are almost overwhelming! The medical, recreational, and household benefits are countless, and the industry is only improving as each day goes by. Just researching the way this industry has come up from the bottom truly inspires me to look towards the future with hope in my eyes, with hope for a less polluted world with less factories and waste. Time, money and labor will be saved, and different jobs will be opened. Quicker production, new combinations of materials, less waste, more modern structures and shapes, and cheaper production are just a few of the great benefits that 3D printing boasts. Soon the entire world will be able to participate in this process, and businesses around the world will be changed for the better. Entrepreneurs will be able to enter the market more quickly and efficiently, without having to save up for the cost of a factory or hiring a mass producer. 3D printing

seems like an all around world changing industry, and I am excited to see the bright future we have ahead as long as 3D printers are involved.