

"pestle" analysis and marketing plan

Business, Company



‘ PESTLE’ Analysis

In this section we will present a PESTLE analysis of the external factors contributing to the future of 3D printing/ Additive Manufacture industry in Bangladesh. With the growth of 3D printing which will be able to create virtually anything the user imagines, problems may arise in the political aspects concerning the maintenance of public safety. Political- Misuse of 3D printers may threaten the safety of the public. To control this possibility from happening, regulations on the production and distribution of 3D printers may be issued so that the Government can develop a database of 3D printer owners with specific serial ID numbers, to control any kind of the production of contraband, illegal weapons, counterfeit products, etc.

Economic- The economic trend in developing countries is extremely positive for purchasing the product. In these areas the number of new SME's is increasing, and people do not need to invest for buying separate machines for every task, hiring staff or building a factories for their small manufacturers because 3D printers will replace everything. With the mass production the price will become affordable for individuals for personal use as addition equipment with the personal computers, similar to the role of 2D printers nowadays.

Social- The influence of the internet or even the social networking site allows people to contact each other or even to share information such as the designs for a 3D printing model. The 3D printing model can be easily downloaded into any PC to be printed out in a 3D printer. 3D printing changes the social markets propagation in terms of employment focus where

individuals are able to run manufacturing and production in any part of the world as compared to the industrial manufacturing norm from centralized development, production and distribution which resulted into concentration of employment only in certain locations (Gibson, Rosen and Stucker, 2010).

Technological- The scope of this 3D technology is vast, having the potential of revolutionizing the complete manufacturing industry through to home fabrication. It can be comparable to the changes from 1960's to present day that IT brought about initially in industry and then in the home. The technology at this time does have limits. Certain design and material considerations have to be taken into account. As well as machine size limitations, some supports are necessary on certain features, and post processing may be required to ensure the parts are viable. Currently low volume production is often economical through Additive Manufacture since hard tooling is not required.

Legal- As introduced under political factors, 3D printing is definitely giving influence and will be influenced by legal aspects it can only be imagined if after 10 years or so millions of people have the possibility to print almost anything at home within a very short period of time. How to protect patents? How to be sure no one is misusing copyrights? However, it is illegal to copy someone else's product and thus society needs to find ways to prevent it. In coming years 3D printing is definitely going to be affected by legal laws.

Environmental- Additive Manufacturing (AM) can be useful in many ways to help a sustainable future. In terms of industry, as the phrase suggests the process uses an additive method. Therefore, there is less material waste and

better energy efficiencies compared to traditional manufacture. Only the processes necessary to form the part are expended and waste is eliminated. With conventional machining, energy is expended to cast ingots and billets, which are then machined to size. AM can lead to better design, these complex geometries may lead to possible reduction in weight. Therefore, not as much material is required for the end products.

As we are the first company to bring 3D printing in our country we have a lot of hope for the technology to really interest our Government and other major companies like Square Ltd, Beximco Pharmaceuticals, etc. As 3D printers have benefited other developed countries with its' various forms of printing for medical applications. 3D printing has been applied in medicine since the early 2000s, when the technology was first used to make dental implants and custom prosthetics. Since then, the medical applications for 3D printing have evolved considerably. Recently published reviews describe the use of 3D printing to produce bones, ears, exoskeletons, windpipes, a jaw bone, eyeglasses, cell cultures, stem cells, blood vessels, vascular networks, tissues, and organs, as well as novel dosage forms and drug delivery devices. The current medical uses of 3D printing can be organized into several broad categories: tissue and organ fabrication; creating prosthetics, implants, and anatomical models; and pharmaceutical research concerning drug discovery, delivery, and dosage forms. Through these different medical applications we can produce products that can help the medical sector in our country to research and develop new technology . Thus, our company has high expectations on reaching a lot of different investors and also benefit the society with our services.

The company's first goal would be to reach as many customers through our printer's capability to create unique and completely customize-able items just as the customer pleases. The customer can create anything they want through different softwares and applications like CAD or even describe to our designer how they want the product. Through a brief survey of different categories of customers from businesses to the general population we were able to know a high number of people would prefer products that are one of a kind. This is where we let our customers use their imagination and creativity to create something unique and one of a kind item ranging from jewelry, scale models for educational and architectural purposes, home décor, RC cars, toys, prosthetic arms and limbs and many more. Secondly, we would like to approach different hospitals and medical centers to market our dental and prosthetic products that may benefit a lot of patients in many ways. Through our research we were able to find that there is no current company in our country who plan to manufacture products using 3D printers but in the near future we are expecting an uprising in competition as there are a various number of uses for 3D printers which can help the economy and the society in a very positive way.

Marketing Plan

As the biggest gain from our product for the customers is uniqueness are prices vary in different range for different products. We have tried to fix the price of our products in a reasonable range which could be affordable by people who are looking for a big and complex designs to people wanting a special item for gifts and personal use as well. Our prices mainly depends on the amount and color of filaments required to print the product as different

filaments cost at different rates. The bigger and more colorful the products the higher the cost of printing it. We have also reached out to a number of different businesses to offer our printing services and they have shown interest on ordering certain goods to be printed as per their customer's choice and also to their businesses' preference. Many shops in the Gulshan DCC market have shown their interest for customize able goods along with a lot interior lighting and decorative shops. We plan to distribute to these different shops and markets along with the option of individual orders certain products can also be sent to customers through different parcel services as Pathao parcels and SA paribahan etc. The customers also have the option of coming to our office to discuss as well as to collect their product. Our product prices range s are:

Jewelry (tk 500-3000)

Toys (tk 1500- 15000)

Scale models (mobile cases, cars, planes, buildings, ships, etc.) (tk. 200-5000)

Medical purposes (prosthetic arms, legs, limbs) (tk. 25000-50000)

Study purposes (architectural and engineering Institute) (tk. 5000-25000)

Home Decor (Cups, wall watch,) (tk. 1500-50000)

We intend to promote our products through these different shops as well as the use of different social media sites like facebook. We also be investing on billboards to advertise our product and service but our biggest promotional

strategy would be through E-commerce. Our office setup would require a moderate space to accommodate our employees and machineries as we will be printing from our office. Our company will also be empowering the customer service staff to take orders without senior supervision and even contact the customer later if required in order to fulfill their product expectation and vision. We will also be hiring a few employees to take orders and assist our customers, most of our raw materials or filaments will be imported from abroad and lastly we will need a team of good engineers and designers to meet our customer expectation of their products. Our team also needs to research with different other ways to develop new products to offer our customers in the future as well as attract more new businesses.