



SUSTAINABILITY & NEW PRODUCT DEVELOPMENT

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**Rachna Singh, GM – Sustainability and Compliance,
Bhartiya Fashion**

Sustainability in any aspect means taking environmental, social, economic, and regulatory factors into consideration while working on anything. The term sustainable product development involves taking all the above factors in consideration for the development, production, use, and the disposal of products. Sustainable development has been a buzz word in garment industry since early 1980s when specific products were identified as being harmful to the earth's atmosphere. Terms like Phosphate Free, Recyclable, Refillable, Ozone Friendly, and environmentally friendly are some of the things.

The last few years have seen many brands facing the new challenge, and they realize they must change the original way of production and consumption and seek out new sustainable production and consumption methods. Through this arises 'sustainable development', which means satisfying contemporary needs without sacrificing the future generations' benefit.



Companies have started to review their processes as well as working towards using resources which will ensure sustainable products.

Today, there are a plethora of sustainability tools and techniques, both at the global and local level that can help us develop sustainable products. In such a scenario, our activities at the local and global level, the willingness shown by the corporates and the initiatives taken by them to promote sustainable practices in the designing and development of a product play an important role. If you are serious about designing and developing a product sustainably, it is important that you put this intention forward right at its formative stage.

What is Sustainable Design?

The term sustainability, especially in the context of product development seems fairly recent, but it is just an expansion of the concepts of eco-design and green product designs that were used by in the 1990s.

These concepts were introduced as a part of the strategies employed by various companies to reduce environmental impacts associated with their production processes.

According to the definition by The World Commission on Environment and Development, sustainable design or development is 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. Simply put, sustainable product management is when companies use green and eco-friendly materials to design and develop their products instead of the traditional ones that cause harm to the environment. Other than this, their products should also minimize waste and consume relatively less energy than the usual

products. The idea is to leave a better and an abundant planet for our future generation. Bhartiya, as a virtual manufacturer and a cautious supplier to brands, has started working on these lines and by year 2020 want to have 5 to 10 percent of their business using sustainable sources in textiles as well as in leather industry.

As per the initial study, the company is working towards using Recycle polyester (which is made by recycling plastic bottles) the proposed product will be dresses, tops as well as using lining fabrics for bags as well as garments.

Sustainability innovation, more than introducing new technology, is about rethinking your entire strategy to meet your growth targets and make profits, while reducing negative environmental and social impact.

Every company needs to sell products, and they need to do it while making profits. Usually materials that pollute the environment come at a cheaper price. Right? Well, not exactly. While the concept of saving energy, creating minimal waste, while producing products that generate profit and also make a company economically viable sound like a far-fetched dream, it isn't in reality. Sustainable designing and development of a product not only affects the environment positively but also reduces costs in the long run.





Sustainable products are more expensive and less profitable is a myth that needs to be broken and that too before it gets too late.

How Do We Define Sustainable Product Development?

Product development is basically the lifecycle of a product. Everything that goes into its designing right from choosing the resources to resource utilization, selecting materials, sourcing, production processes, consumption, and disposal. When we talk about sustainable product development, we include all the things that have been mentioned above. It is important the clean practices are used in all the stages of product. The idea is to promote cleaner and greener practices while making profits at the same time.

Sustainable viscose (which is the latest demand from our customers) will be used majorly for fashion dresses, tops, skirts, t-shirts, etc.

Viscose gets sustainable because of sustainable sourcing, the wood source is from the FSC (Forest stewardship council) this means the product is not made via deforestation, it is growing resources and entire process chain uses environmentally safe process which is approved by Gots, Oekotex and is also part of Higg Index. We will be creating their own collection in coming months to propose to different customers, however recently the fabric has been selected by few existing customers and collection is prepared for dresses and tops in both Recycle fabric as well as Viscose. The new fabric which are in process are Organic fabric with blends in recycle polyester as well as viscose and vegan suede which is Non-Animalorigin.



We can say that each product goes through at-least four stages in its lifecycle. These stages are- manufacturing, transportation, use, and disposal. Sustainable product designing refers to minimizing waste and saving energy in each of these stages. If we address the basic questions such as the amount of energy required to manufacture the product



What Is The Approach That You Can Take To Keep Your Product Out Of Landfills?

What should you do when a product's lifecycle ends? Should you throw it in a landfill, or should you help its transition into a new life when the current one ends? Thanks to new technologies available, we have the option of recycling the products, upcycling them, or even turning them into something new. This approach is called the cradle to cradle approach that was popularized by William McDonough and Dr. Michael Braungart, the two stalwarts of sustainable product designing. It contradicts the traditional approach of designing and development of products that focuses on the finite lifecycle. This is called the cradle to grave approach. The cradle to cradle approach focuses on employing new technology to recycle your product into something entirely new. You can also reform or refurbish its components to use them in a completely new device. The same can be applied to the product packaging as well.

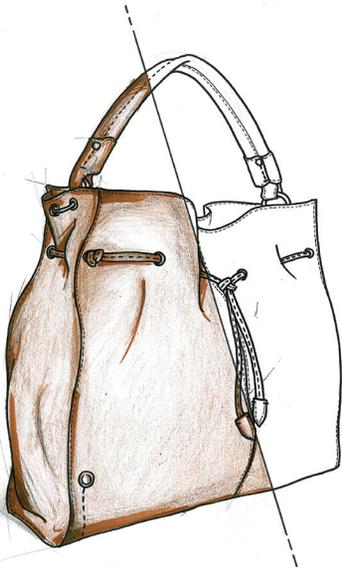
Designing Sustainable Products & Some Examples of Such Designs

Recently, nothing has been demonetized more than plastic and plastic products yet there has hardly been any decline in their consumption. Half of all the plastic ever made was produced in the last thirteen years, according to the investment house Hermes. They also say that the output is all set to increase by 40 percent in the next decade.

One of the main reasons for the popularity of plastic despite its obvious disadvantages and more than enough proof that it is degrading the environment is its durability. Unfortunately, its advantages are the



i.e. acquire the raw materials, assemble the product, and transport the product to retail locations or directly ship it to the homes of the consumers, we will be able to figure out a way to reduce the energy required and minimize wastage. Similarly, we should follow this pattern in every stage. Establish the maximum amount of energy required and waste generated, and then work on methods to reduce it in order to reduce the carbon footprint and develop a sustainable product.





Myntra has constantly evolved and enriched the algorithm and approach towards fashion retail with technological initiatives. Today, the e-commerce giant is able to analyze shopping and browsing behavior of more than 35 million customers every month.

even take environmental degradation into consideration. Economically, this model sounds viable because it helps manufacturers cope with the constantly increasing demands. Sometimes, the demand for these products is stimulated by making the products in such a way that they would be rendered obsolete after a while and consumers would have to opt for newer ones. However, the environmental cost of such a model is quite high. It does nothing to prevent resource depletion and pollution, rather promotes it.



reason why it is such a menace these days. It is light-weight, cheap, easy-to-use, and requires less energy to produce, hence it is made in abundance and readily available. It has become the embodiment of all evils of our consumerist lifestyle. It is durable, which means that we see it everywhere. Of the 8.3 billion metric tonnes of plastic ever produced globally, around 4.9 billion tonnes have been discarded rather than incinerated or recycled. It is true that it is possible to recycle plastic, but the entire existence and use of plastic is not centred on the fact that it can be recycled. In fact, plastics are not made to be recycled. They are made to be used and thrown away.

Plastics are just one part of the problem; a mammoth part nonetheless; but a part of the problems associated with linear economy where goods are produced in 'take, make, and waste' model, which is based on the assumption that the resources are infinite, and will always be available at our disposal. This model does not

The other kind of model is the circular economy, which requires a complete and significant shift in the mindset. This model follows the principles of sustainability, ensuring that the production of goods has a minimal impact on the environment in terms of water, energy, and material used. It also ensures that the products made can be reused or recycled- the cradle to cradle approach we have already mentioned above.

The circular economy model is not without any takers. Many companies are adopting it either partially or completely. Philips follows the principle of 'healthy people sustainable planet', while designing its products. By 2020, it aims to have 70 percent of its turnover coming from solutions that



THE ASPECTS OF MAKING A PRODUCT SUSTAINABLE

According to the cradle to cradle model, there are five aspects to making a product sustainable-

- All the products should be safe and healthy for the environment as well as the humans. This needs to be inculcated in the product during its formative stages itself. The companies that are serious about designing sustainable products take this factor into consideration.
- There is a concept of the closed-loop system, which presents a pretty idealistic situation where once the product is no longer useful, there wouldn't be any unusable waste. Either the components can be reused to make other products or they are biodegradable and can go back into the soil. There are certain Chinese candies that come wrapped in rice paper, that can either be eaten or thrown because it is biodegradable. It is a great example of a simple yet revolutionary product designing.
- Ideally, producers should use renewable energy such as solar, wind, or geothermal during the production and development of products.
- Water leaving the factory should not be dirtier than its previous state. Ideally, it should be cleaner, but if we can't ensure that, we should at least prevent adding any more filth to it. In addition to this, the water usage should be minimal. An example of this is the bananas coming from the Dole Company in the Philippines. They are packed in the field by innovatively designed packing plants that use 90 percent less water.
- The companies should have a keen sense of social responsibility. The people who grow and harvest the raw materials should be given fair wages, benefits, respect, and good working conditions. Usually big companies in their quest to earn more profits, set up their units in underdeveloped third world economies where they can get cheap labour, and this labour is made to work for long hours without a proper compensation. This attitude goes against the principles of sustainability. Human dignity is extremely important when we are talking about designing a futuristic, sustainable product.



meet the principles of EcoDesign and 15 percent that stem from the principles of the circular economy. They also aim to recycle 90 percent of their operational waste and send zero waste to the landfills. In addition to these goals, they also strive for an injury-free, illness-free work environment, with an emphasis on an injury prevention mindset for an employee. This is one of the most important aspects of sustainability. We cannot aspire to go green and sustainable if our employees work in toxic environments.

In order to change their mindset and the mindset of their customers, Philips started to sell their products as their services. So, instead of the term 'light



bulbs', they use 'lighting', that immediately offers a sense of durability to the product and allows producers to have a greater control over the products' lifecycle.

Fairphone, a fairly renowned Dutch company has gone a step further. It claims to be the producer of 'world's first modular, ethical smartphone', which means that their products are designed to be recycled, repaired, and improved, rather than disposed of once its lifecycle ends.

Bhartiya is taking beginning steps towards sustainable fashion business or in other words Eco fashion and would want to promote more and more to their customers with continuous researches and proposals. Samsonite, the luggage company, has come up with the ECO-Nu range made entirely from recycled plastic bottles. This concept has found many takers among the environmentally conscious community.

These are a few examples of some of the companies that utilized technology to produce eco-friendly, sustainable products. Even though the advantages of linear economy look more prominent on an extremely superficial level, the benefits of circular economy for the society, planet, and businesses are more long-term, perpetual, and substantial. Most importantly, we need to utilize are already depleting resources smartly, and the tenets of the circular economy model addresses the issues of resource security and scarcity, and waste, that has off late become a huge issue for the environment, becomes a resource rather than something that needs to be shunned.

