

Question 4:

Outline a current environmental, political, or social issue that requires redesign. Explain how you will solve this issue over the duration of your future design career. Underline the tools and approaches you will use and discuss how and why.

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When I look at designing, I always fall down the hole of focusing on aesthetics rather than the properties. I delve too deep into appearances and functions but not the materials which can become a problem if I want to impress future employers. Also, I feel I don't take into consideration the impact of the materials that I am or could be using. I also feel that companies are not fully taking this into consideration or advantage of this. I have decided to investigate the environmental impact of plastic and the use of raw materials and how eco-design is something that needs to be implemented more. I feel that this is a big issue that needs redesigning.

Our earth is 4.543 billion years old and is our home. As a nation, we have become addicted and allowed this habit of using single-use plastic and plastic in general for everything. We also produce so many products using raw materials and our consumption of these has doubled over the last 30 years. As mentioned in an online article "We produce about 300 million tonnes of plastic waste every year" (Our planet is drowning in plastic pollution. This World Environment Day, it's time for a change, 2021). We only have a limited amount of these, and our planet is paying the price for our selfishness and greediness for these. There are so many ways we can stop this, but we seem so addicted to it that a small minority of us care. Some people protest the use of plastic and some companies refuse the use of it. Animals are also highly affected by this such as sea life. The ocean is filling up day by day with plastic. Sea creatures are consuming the plastic waste, dying from it and or swimming into plastic parts and strangling themselves. When looking into materials and the impact we should all be considering the impact on the world, animals, plants, even the people.

Also, we need to take into consideration the use of raw materials, CO₂, and energy used to make products. If we follow these methods, then it slows down the use of precious or non-renewable resources. As said in an online article "the European Commission says that "nearly 80% of a product's environmental impact can be improved through eco-design." (Designing the products to meet environmental challenges is possible and needed, 2021). The fact that we are using them and not taking into consideration the fact that the things we are using are not going to last forever. Companies and designers are just hoping that it will be fine. These materials will not last forever and can be used for other important things that we don't necessarily use. The fact that other materials are recyclable and sometimes more durable and not being used is baffling. Why create a product that is harming the earth at the end of its use and whilst being made when there are better options. I can understand that it may be cheaper for the company to use plastic and cheaper to produce the products of choice but to say you own a green company and your products are green and I helping to world then surely that is more important for sales and advertisement.

Eco-design looks at a product's life cycle and tries to get the lowest possible environmental impact it can. It looks at how we can get optimal use of resources and energy and sustainable infrastructure. Eco-design is more sustainable for industries as it is more innovative than most things these days. It looks good on the company as there is a small amount who already do this but for the ones who didn't use this method before it makes them stand out from competitors and look good. Also, if a customer is happy with a product and or company and they go eco-friendly and use eco-design methods it makes for happier customers and makes them feel good as they are now helping as well as you. Some companies out there do it but not enough to stand out. It allows for market differentiation and adds value to your products compared to your competitors. You want to feel good selling a good product that is helping save the world and people also like to show off that they are helping as well. One other thing that customers enjoy is reduced retail price. It increases the profitability of the company and reduces the retail price. This is another major factor of why people would love and buy it. You could be buying the same item but be saving the planet and for cheaper and everyone loves a deal.

Also, if companies start to use eco-design and become more eco-friendly it allows for more efficient production. This will save on the usage of energy and money for the company. It also means longer-lasting raw materials. By using eco-design methods, it looks at the life cycle and impact of the product. This means that fewer emissions are produced slowing down greenhouse gases. It also helps towards the endangerment of animals and plant species. It also gives the product a better life. They are forever in use in a waste-free circuit. This just means they can be used over and over again as they will be left in a suitable condition. As they are so easy to recycle, they also become easy to disassemble which means less energy is used to do this. Not just the products themselves but the packaging plays an important part in looking after the environment. If eco-design methods are used, then it means we can have optimum packaging. This means it still has great storage, hygiene, and protection. By doing this we are reducing waste. People love to see a company being greener and send out the green message to customers and other consumers.

Although we use cardboard already which is reasonable and has a low impact on the environment. It is decomposable and 100% recyclable. Although it is not a material made for lifelong products it can be amazing for packaging. When we look at re-designing for packaging, we should consider using cardboard more. We use these airbags made from plastic to hold our products safe during transit but why not use cardboard. Cardboard can be manipulated to whatever shape you want. Instead of the airbags, we could use shredded cardboard. Some simple tips and tricks should be used more and using cardboard are one of them. As they are decomposable, can be used as a space saver or product holder they can be much better than plastic. By doing this we reduce the use of plastic and keep the impact low. When looking into packaging for products I make I always use cardboard.

One of the methods that are used to incorporate eco-design is bioplastic. Bioplastic is made from renewable biomass sources such as vegetable oil, straw, and sawdust. It creates a lot fewer fossil fuels in transit, less energy, and less waste than normal plastic. Bioplastic can also be broken down or biodegraded by using water, carbon dioxide, and microorganisms when composted. Another advantage of biodegradable materials is that they are longer-lasting, this is something that can be promoted from the company to customers as this will entice them more to buy it. Using bioplastic is an overall advantage for the world and should be implemented more. Although bioplastic is not perfect it still is a massive improvement on what is already being used and allows people to become greener.

One thing that poses a question to me is why don't companies already want to be green? It is killing the world, plants, and animals every day. Just taking into consideration the world saves you money and allows you to say you have a green company. The fact that just changing material and how they are produced can make such an impact on the world, why can we not do this more? I feel more protesters or just people who care for a greener planet should talk to more companies who are well known for their plastic waste and get them to become more recyclable. Also, in universities on product design courses, you do learn about the impact on the world and what is bad but they don't push for it. I feel that it should be pushed more as we are the future of design and if we are not told about the circumstances more then our work will be the same as today and the world will not get any better and the impact will go up. As we are the future of design I feel it is super important to implement this more. This can be done by lectures, online courses or even going to companies and getting them to explain why going green was better and why it helped them in the market for selling and profit.

There are 3 design certifications that I think all companies should adhere to or it should be made compulsory to follow. If they do produce eco products it means they have to adhere to the rules which are as follows:

1. Cradle to Cradle
2. ISO 14062
3. ISO 14001

The first certification makes the company follow 5 critical performance categories. These include:

1. Material health
2. Material Reutilisation
3. Renewable Energy and Carbon Management
4. Water Stewardship
5. Social Fairness

This certification is great as it looks after the product from start to finish. It takes into consideration the health and reusability of the product. It also watches how much it uses water looking after a raw material. This is a great certification to look after the product's life cycle and the usage of raw materials. It also means that it attracts multiple consumers rather than a small minority. The second certification is international. It monitors the use of environmental aspects within the design of products and their development. This takes into consideration the impact on the environment and how it can be reduced and or monitored. This means that we can consider all this when making new products. This allows us to make products we want but also watch how we are going to be impacting our home. The third is a commitment that they make towards the environment. This commitment is to watch out for the ecological hazards within their products. Companies who use these will have no excuse but to be eco-friendly. These are certifications that I think can easily be integrated into companies if they put the work in. If more companies followed these the level of raw materials would increase, and waste would decrease, and this is what we need desperately.

Although I have mentioned plastic in the case of products and packaging, there are many products themselves that are plastic for example straws. 'Five hundred million straws are used each day in the US' (2021) They are one of the biggest things to be advertised as bad as they are the most popular single-use plastic thing we use once then throw away. Places like McDonald's and KFC have already implemented paper straws. Although these may not exactly be popular or liked that much, they are reducing the amount of single-use plastic. When considering re-designing I feel there must be a better alternative as they can be used for about 5 minutes before they become too wet and not usable anymore. Some people carry metal straws with them, but this can be annoying. People have now investigated edible, bamboo, bioplastic, and sip cups as a replacement. Although people could carry their metal and or bamboo one's places like McDonald's need better solutions so they can still help with the impact but keep customers happy. I feel any place that does take away drinks should start using the 'sip cup' method. Most of these cups would have lids anyway so use more materials when a hole can be created in something that is already made. If this re-design was implemented more then it would save the world so much more and create less of an impact. There will be cases where straw is used but rules can be made that you must purchase bamboo or metal straw from the place of purchase making people either carry one or consider the reason why this is being implemented. Although it may seem such an inconvenience and such a simple thing as a straw, it does help the impact that is being made and can help contribute to what needs to be done.

I think I will give myself a step-by-step plan for when I am designing. I will use it to help take into consideration the types of materials and how I will always be looking at the impact that I create.

1. Sketch ideas
2. Research in the products already made

3. Crowdsourcing
4. User profiles and day in the life
5. My ideas
6. Development pack
7. Prototypes
8. Research into materials
9. Consider the 3 certifications
10. Look into the impact the product could be creating
11. Final designs
12. Final materials

I will use this list as a starter to help me to always look into the impact and to always allow me to think about the environmental impact. I think companies should use something like this to also allow them to think about the same things. Even if you have not used an eco-friendly material because of the type of product at least you have tried to consider being green and help in any way you can.

After looking into all of this, when taking into consideration re-designing the environmental impact there are many things already being done like mentioned above. I don't think it is the case of re-designing but implementing more. Of course, we are always going to be looking into more things that can be made in replacement, but we should be utilizing the things that are already made now. I think that when I go on to design things, I want to design using eco-design and follow the certifications to know the impact I could be creating. In the future, I will use all the certifications when looking into materials and their durability. I will test using more recyclable materials. I like the idea that from now on I can be using all the materials that I have researched and the methods in my future projects. I feel that being more ethical when it comes to these things means that I can stand out from others and attract a different customer than I normally would. Sometimes using recyclable materials can be stronger or look aesthetically pleasing compared to others. All in all, I think companies are losing out by not becoming eco-friendly or at least more eco-friendly. I feel there is a massive margin in the production and design of products that are being missed. I will from now on always look for a more sustainable way to do things and always think of the impact that I could be creating on the world.

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