

This exhibition will focus on the issue of climate change and the cause and effects that product design may have upon it.

1902491

Product Design

Word Count 1645 Words

Julia Lockheart & Gwen Beynon

Exhibition

Brief

This exhibition will demonstrate how the whole of the UK is responsible for reducing pollution levels and reducing the effects of climate change.

I have chosen the four areas of the country that will have a statue to highlight this; North - Wick, East - Scarborough, South - Southampton, and West - Port Talbot.

Wick - North

Rubbish with a sweeping brush will demonstrate how recycling is needed to be done more proactively to curb the climate change effects.

Scarborough - East

1 man trying to cut a tree down with another attempting to haul it back up is a show of the battles people face against pollution.

Port Talbot - West



A vacuum cleaner will be erected to highlight the issues of the local steelworks.

Southampton - South

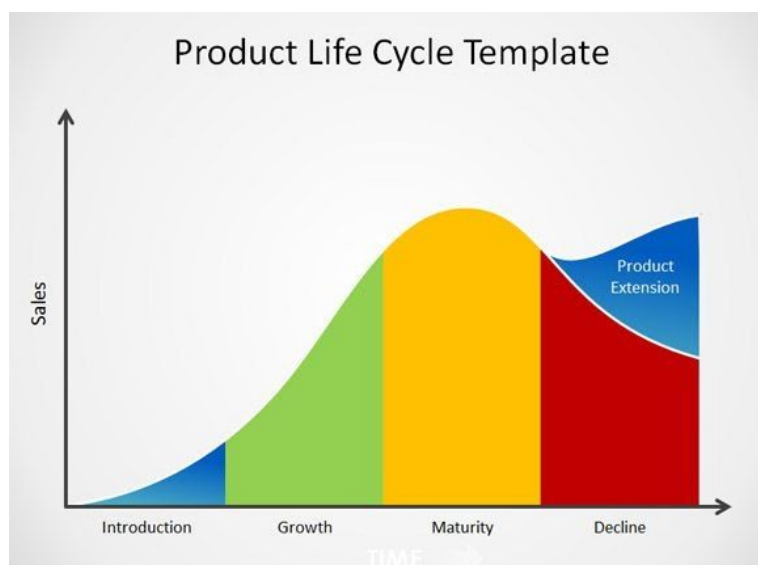
Gas masks, which show how the effect of pollution can have on us in regards to air pollution and what we as society need to do to stop this being normal.

Introduction

This exhibition will focus on the issue of climate change and the cause and effects that product design may have upon it. Thinking along the lines of John Wood and using the following quote as inspiration and instruction we can explore how this can be achieved - "In reflecting upon the designer's role in an environmentally destructive economy, design is now an integral part of the system needing reform" (Wood, J, 2019)

An example of this could be how the product is going to be packaged.

Such as, will the package be biodegradable, produced in a factory or elsewhere, transported to local or big markets, used by the person who uses it, and lastly, how will it be disposed of when it is no longer used or needed. People are more likely to choose products based on the environmental factors in a design.



<https://www.pinterest.co.uk/pin/75364993742218806/>

Using the work of artists, Anthony Gormley and Banksy, I will review the intentions behind their work and their focus on how the world and its current production industry are affecting global warming. I will conclude by discussing what can and is being developed to help diminish the effects of climate change. The exhibition inspired by this research will mirror that of Gormley, who had cast iron statues placed on the shore in Liverpool; however, it will be focused on the effects that products – a vacuum cleaner in this case – will have on the environment.



https://photoeverywhere.co.uk/britain/liverpool/slides/antony_gormley_another_place.htm

Effect of product design on the current climate change issue

One of the world's biggest climate change impacts is worldwide flight travel (Terrenoire et al. 2019). Furthermore, Terrenoire et al, (2019) state that aeroplanes carry approximately 4.1 billion people annually and have been causing pollution by discharging around 859 million tonnes of carbon dioxide into the atmosphere. However, according to Chapman, J. (p.07,

2017) “human destruction of the natural world is a crisis of behaviour and not one simply of energy and material alone”.

Following the discussion of human destruction, ‘carbon footprint’ is widely used to describe the total amount of emissions that have been produced by animals and people. Worldwide flights represented 36%-51% of total emissions. According to, Terrenoire et al. Lots of theorists have suggested that by 2050 the amount of emissions will double that of 2010 (Terrenoire et al. 2019).

This implies that the way in which designers approach projects will need to be changed significantly.

Another one of the biggest climate change problems is unroadworthy vehicles, which are responsible for over a quarter (27%) of the total emissions, cars and vans are responsible for more than two thirds of this number, and by 2050 it is estimated it will rise to 40% if nothing has been done to stop this increase. (Todts, 2018, p.08).

This would mean they will need to change the ideas of materials they are using to fly the aeroplanes and maybe the process of how it is manufactured. This would then change the mindset of people buying the aeroplane as most businesses only carried 4-5 people on average on private jets, which use lots of fuel compared to commercial aeroplanes. Whilst the use of energy efficient cars would need to be implemented so that the rise in car usage can be offset by more environmentally friendly ways of doing so.

Whilst some of these statements imply that humans are the ones to blame for the damage caused in the world. Behaviours of the human population needs to change in a sense of choosing to walk and not drive, or going on less holidays abroad. It is all good and well saying that vehicles need to become more economically friendly, however, humans need to also be of this way of thinking so that the world will become a safer/greener place.

Products are designed to be replaced frequently, eg Apple, who keep upgrading features on phones so that old ones become obsolete. Some products are designed with a large amount of packaging or non-recyclable packaging to make them more attractive to consumers.

Whilst there is also a term 'throw away culture' which means that we buy products knowing that we will only use them a couple of times and then throw them away. (The Guardian, 2019) Other than fashion and devices, the design of cups for takeaway coffee from Costa and Starbucks is another example of 'throw away' culture. (Inews, 2018)

The reason why we have the title of "Throw away culture" is because the products are cheap and people only use them once or twice then move on and throw them away onto landfills.

Current climate change policies

There are many products that are trying to have a positive effect on climate change now. Examples from the motor industry include smaller engines in vehicles and stop-start technology. Cars are being made using lighter materials such as aluminum and plastic to lower the vehicle weight - this in turn reduces the fuel consumption and therefore the CO₂ emissions. Modern cars also have DPF (Diesel Particle Filter) and petrol particle filters in the exhaust system to lower emissions, car designers also improve vehicle aerodynamics lowering drag to use less fuel, less fuel used means less emissions. (Stephenson N, 2020).

Another example would be changes to recycling targets and arrangement for example in the Vale of Glamorgan the Council rules are now that every household is only allowed to use two black bags every fortnight and commingled recycling every week. Collections for garden waste are reused as compost, every week they also collect kitchen food waste to get recycled into compost (Vale of Glamorgan Council website, 2020)

Plan to Alter effects of climate change

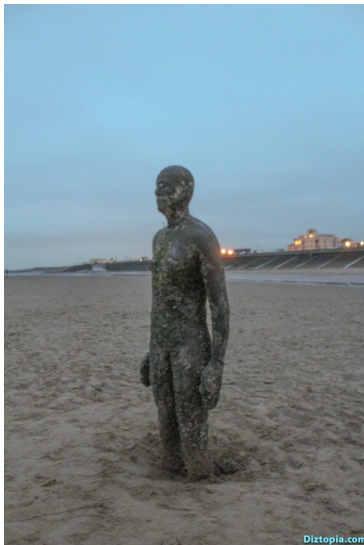
Thinking about the future and looking at the above mentioned references, some of the ways that industry and the government are trying to ease these problems is through changes to the way we produce energy.

According to Rashad (2000), One of the most recent and controversial design ideas was changing Fossils-fuel power plants into Nuclear power plants and Hydro power plants. In addition the production of energy from other renewable sources , such as solar and wind power, has had a significant impact on how people would like and expect to source their energy and how products are designed to operate using these power sources. The reason for this change (Rashad, 2000 p211-229) is also linked to the efficiency and output potential of alternative energy sources compared to fossil fuels. It has to be considered that the power stations themselves are not the only things that give off harmful emissions as for traditional fossil fuel powered stations the process of getting the coal to the plant causes pollution as well.

Another area of design where alternatives to fossil fuels are being introduced is electric cars, as the energy source that is replacing fossil fuels is electricity. Targets have been set by many governments worldwide including the UK for reducing car emissions in this way. This is ideal for the future plan for reducing the carbon footprint. "Carbon footprint over 100,000 km calculated for the converted 10-year-old Smart exhibits a possible reduction of over 80% in comparison to the Smart with internal combustion engine." (Helmerts & Marx, 2012)

This shows that using electric cars reduces 80% of the emission of carbon dioxide coming out from the cars.

People links to my Exhibition



<https://dizma.site/2017/03/17/liverpool-uk/>

Antony Gormley is a British sculpture artist who placed 100% cast iron male sculptures on Crosby beach in Liverpool.. There are many other sculptures in other countries such as Norway in Stavanger, De Panne in Belgium, and Cuxhaven in Germany. A sculpture of a man is represented as mental health links to men (Visit Liverpool , 2020). The reason why it has been placed on the beach in Liverpool is because “The beach is the opposite of pretty. It is terrific and brutal, and it is a working beach” (Fitzimmons F, 2015) This suggests that the beach in Liverpool has had all these things happen, just as a man can have these problems - whilst struggling to cope dealing with them.

Banksy is an anonymous British street artist and has done lots of graffiti all over the UK. He recently used graffiti to show a fire on the bin on one side of the walls and other side of the walls is a child playing and thought the ash was a snowflake. This is based on a garage in Port Talbot and it is pointing toward the steelworks. (Morris S , 2018) This is quite prominent as Port Talbot is in the top 30 most polluted environments in the whole UK. (BBC , 2018)

Exhibition

In my exhibition, the basis will be on artwork and sculpture statues in the four corners (North, South, East, and West) on the UK map. All four corners will have different artwork or sculptures in different locations around the UK. An example of this would be a sculpture of a vacuum cleaner being placed toward the steelworks in Port Talbot (west). By doing this, it will have more of an environmental key message to the people around the UK and make them aware that climate change is serious and on our doorstep. I hope the message will reinforce the message that it is damaging our Earth and we, together, need to do something about it.

Conclusion

In conclusion, the only way to improve these issues is to have designers working with manufacturers, which then need to relay the ideas to the public in a way that they can understand the thinking behind the designs. The subconscious needs to be stimulated in the public so that they make decisions on what they buy and do with the products that people are designing with the theories discussed above in their mind. This has made me realise, as a designer, that products do not only need to be made functional, but sustainable, so that the population can enjoy these products in a thriving and healthy environment for many years to come without fears for the health of loved ones or themselves.

Reference

(Chapman J , p.07 , 2017 , Routledge Handbook of sustainable Product Design ,
<https://books.google.co.uk/books?hl=en&lr=&id=di4IDwAAQBAJ&oi=fnd&pg=PP1&dq=Jonathan+Chapman++environment+and+sustainability&ots=0ZZ-pl78DR&sig=xuVjggwTamKMNJyQX6PENyev6aQ#v=onepage&q=Jonathan%20Chapman%20%20environment%20and%20sustainability&f=false>)

(Fitzimmons F, Antony Gormley explains why he chose Crosby Beach over Southport , 2015 ,
<https://www.southportvisiter.co.uk/news/southport-west-lancs/antony-gormley-explains-choice-crosby-9572300>)

(Helmers E & Marx P , 2012 , Electric cars: technical characteristics and environmental impacts , <https://link.springer.com/article/10.1186/2190-4715-24-14>)

(Morris S , Banksy confirms he is behind Port Talbot Mural , 2018 ,
<https://www.theguardian.com/artanddesign/2018/dec/19/banksy-port-talbot-mural-south-wales>)

(Rashad S.M , p.211-229 , 2000 , Applied Energy ,
<https://www.sciencedirect.com/science/article/abs/pii/S0306261999000690>)

(Stephenson N, 2020, AA)

(Terrenoire A, Hauglustaine D, Gasser T, Penanhoat O, Jan 2019 , IOP Science ,
<https://iopscience.iop.org/article/10.1088/1748-9326/ab3086>)

(Todts W , 2018 , Transport & Environment ,
https://www.transportenvironment.org/sites/te/files/publications/2018_04_CO2_emissions_cars_The_facts_report_final_0_0.pdf)

(Wood, J, 2015, From Product to Relations
<https://metadesigners.org/Downloadable-Articles>)

(BBC , UK's most polluted towns and cities revealed , 2018 ,
<https://www.bbc.co.uk/news/health-43964341>)

(Inews, 2018 ,
<https://inews.co.uk/news/starbucks-to-create-worlds-first-totally-recyclable-compostable-take-away-coffee-cup-311525>)

(Vale of Glamorgan Council website , 2019 ,
<https://www.valeofglamorgan.gov.uk/en/living/Recycling-and-Waste/Black-Bag-Household-Waste.aspx>)

(The Guardian, 2019 ,
<https://www.theguardian.com/business/2019/aug/28/primark-to-train-cotton-farmers-environmentally-friendly-methods>)

(Visit Liverpool websites , “Another Place” , 2020 ,
<https://www.visitliverpool.com/things-to-do/another-place-by-antony-gormley-p160981>)

