

Report -

“How can Eco-Collective build a community facilitating access to sustainable materials, within the graphic design industry?”

Introduction

On closer inspection of my overflowing recycling bag contents, I realised that the majority of items I thought were recyclable are not *actually* recyclable at my weekly house collection point. In fact, despite there being a large recycling symbol on packets, it only means half is recyclable or only to be dropped off ‘with bags at large supermarket’. There was even packaging which had no information whatsoever on how to sustainably dispose of it, which is concerning as we are more aware than ever about our planet and the problems with pollution.

As a graphic designer, I am curious as to why brands have opted for designed packaging which is environmentally damaging, and to investigate how much sustainable input graphic designers have within a project. From speaking with various industry experts I hope to get a sense of the real issue in the design industry and how I can create a solution.

Design industry operations today

The graphic design industry today is thriving more than ever in the 21st century with much of its success a result from the advancement of technology. There has been a shift within the industry and the development of new roles that are beginning to overlap. Consider how 30 years ago there would have been one graphic designer that would have been creating typography for newspapers. In today’s society, the graphic designer has evolved to be a wearer of several hats, multitasking and being multi skilled. Creative job roles have expanded as technology has developed, examples include web design, marketing, advertising, digital content creators, photography and film makers.

Along with this fundamental development in the industry, comes software and tools which aid daily practice. Graphic designers now have a selection of programmes and toolkits to create projects, each suited to a particular task.

In order for me to begin to identify the problem with access surrounding sustainable materials within the graphic design industry, I need to explore the key fields within the industry and what alternatives are available on the market to clients.

Print

Within the print industry, there have been some controversial debates around whether ink or paper is source of the problem when it comes to sustainability, including the proposal to the government written by 14 year old Suvir Mirchandani (CNN, 2014), which claims switching from times New Roman to Garamond will save them “\$400 million dollars”. Although this claim didn’t turn out to be completely accurate, it got people thinking about the impact that ink and paper have on the environment.

Some factors to consider for improving sustainability are:

- Kerning needs to be small
- Weight needs to be thin/lightweight
- Sans-serif typeface use less ink than serifs
- Size needs to be considered in terms of how much paper is used for printing

“Century Gothic is often cited as one of the most efficient regular fonts; because of its thin print lines it uses 30% less ink on average than Arial. However, Century Gothic is a large, broad and wide set font so whilst it uses less ink, it uses more paper when comparing fonts like-for-like at the same point size. Using a smaller point size can reduce this negative impact; Century Gothic can accommodate this without losing legibility because of its wide-set nature.” (Leap, 2020). The quote above explains whilst a typeface may have a thinner weight, it’s wide on a page and therefore uses more paper. The challenge for a sustainable typeface it to consider the carbon footprint of the printed material; not just the ink. A typeface that uses more pages uses more paper, therefore more space, more fuel for transporting and energy, power, time etc. and therefore it has a really big impact.

Materials

You will have heard of the three R’s - reducing, recycling and reusing. This is a great motto but it will only get us halfway there in terms of saving our planet. We are now at the point of no return - it’s no secret that our

planet is drowning in plastic and it's predicted by 2050 there will be more microplastics in the ocean than fish (Ellen MacArthur Foundation, 2016). This instantly tells me that those three R's are simply not enough to transform our industry and the way we generate materials. Resources such as ink, paper and plastic that are sprinkled at customers to resonate a brand/company need not be wasteful. There are clever ways to promote a brand sustainably which can be just as effective, and bio-materials play a large role in this. There has been a huge shift in the last few years with awareness around sustainable alternatives; in the design industry there have been many start-up companies generating their own bio-materials from vegetables and organic matter. Interestingly, the first plastic named 'Parkesine' that was bio-based was made from cellulose by Alexander Parkes, in 1862 (Plastics Make it Possible, 2018).

Here are some more examples:

- Botanical Inks studio are demonstrating a variety of ink techniques on fabric, paper and printing by using flowers and natural dyes from nature. From wrapping up the flowers within the fabric and leaving them to stain, to diluting them in water and using as tie-dyes and ink, there are so many different ways to use them (Babs Behan, 2018).
- Cleancult addresses concerns around sustainable materials not being appropriate for perishable goods and have developed paper based packaging for milk cartons. This demonstrates how it can be possible to keep perishables fresh and sustainable at the same time (Cleancult, 2021)
- Wise by Patagonia have also reassured consumers that sustainable materials can protect and preserve cosmetic goods by creating sustainable paper pulp packaging that is FSC forest certified (Dieline, 2018).
- The entirely dissolvable packaging developed by Mi Zhou demonstrates that the afterlife of a packaged product need not exist. At the same time, Zhou is also challenging the aesthetic boundaries of sustainable design as Soapack can be treasured as an ornament (Dezeen, 2019).
- Colour and texture has been successfully displayed throughout all of Elena Amato's work, proving that material made from bacterial cellulose in fruit and vegetables can be colourful, practical and look visually appealing for branding (Hitti, 2019).
- The fashion industry could take notes from Elissa Brunato's Bio Iridescent Sequin, which has been created using 'wood's ability to form structures that refract light' (Brunato, 2019).
- Additionally, designers such as Suzanne Lee, Ross Lovegrove, and Neri Oxman have all delivered inspirational lectures around advances within the bio material field and have shown that switching from manufactured synthetic material to organic bio material is logical and futuristic (Lee, 2020; Lovegrove, 2005; Oxman, 2015).

So this has me wondering, why are we not seeing these innovative inventions above in the design industry? Are biodegradable materials really as good as they are made out to be? To understand this I need to research the current methodologies and processes within the design industry further.

From discussions with sustainable manufacturers I have been informed that currently, the process for manufactured packaging is split into two - industrial and retail packaging. Industrial packaging involves the shipping, factory and general manufacturing processes involved to protect products, whereas the retail packaging is customer facing. The difference between the two is interesting and highlights the differences required when brands advertise. Industrial packaging is often very basic with instructions on how to handle boxes, whereas retail packaging is all singing and dancing - often designed to lure the customer to the product. As the retail package is what sits on shelves this is where the overall design of colours, slogans, logos and package functionality is considered.

Unfortunately, this also means this is where greenwashing is introduced (along with the digital and printed marketing and advertisement of the product).

Greenwashing

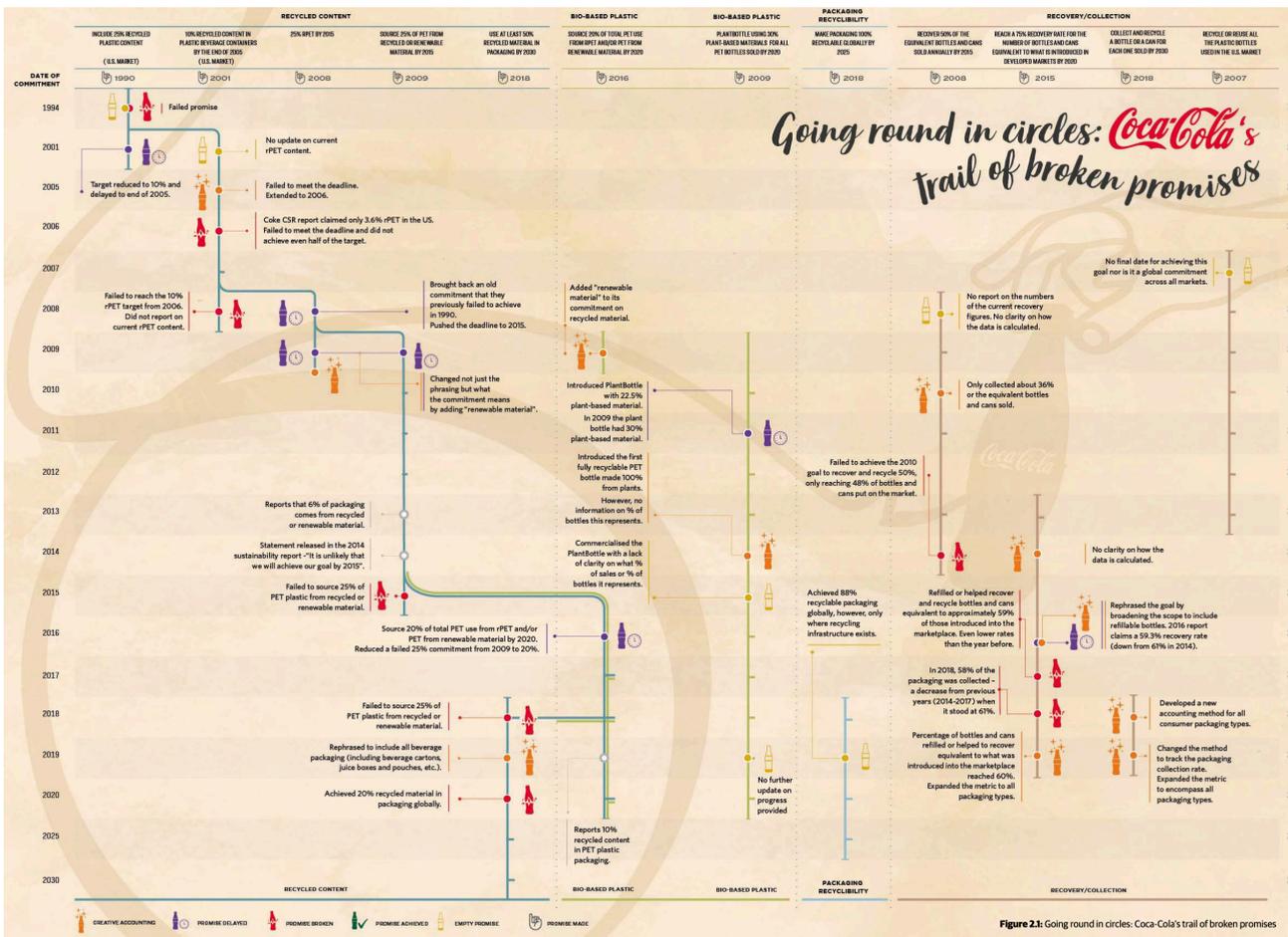
One thing to be careful with is greenwashing surrounding branding such as misleading wrappers, symbols and advertisements. Phrases such as "eco-friendly", "ethically made", and "non-toxic", alongside bold advertising claims and eco power-moves, are thrown about by brands (Living and Vegan Food, 2021) in order to market their product to sustainable consumers and gain leverage over other competing brands in the market. Terminology definitions sound very similar but have different meanings, some examples are as follows:

- Recycled
- Recyclable

- Reusable

Recycled material refers to the process of plastic being transformed from one product to another, whilst recyclable material refers to plastic being collected to be made into something else. Reusable material is to imply that the item can be reused before it is disposed of (ideally recycled if possible).

Coca-Cola's plant-bottle is one example in a long list of brands which use green terminology as a marketing ploy to gain leverage over their competitors. What Coca-Cola aren't telling you: their bottle is still PET plastic. Their bottles have switched from using fossil fuels in production lines to sugar cane material, which harms wildlife and destroys plantations. "They're just using plants to make the same polymers you find in other plastics. It has zero effect on plastic pollution," says Marcus Eriksen, a marine expert who studies ocean plastics (Westervelt, 2011). Exploring this further, a bottle bill could be a sensible solution, but Cola seem to be refusing to do so (The Intercept, 2019). It's interesting as Coca-Cola initially began this incentive, where customers had to return the glass bottles in order to drink Coca-Cola.



(Above image: A valuable insight to Coca-Cola breaking sustainable promises (Tangpuori, et al. 2020).)

- Compostable
- Biodegradable

Compostable items, if properly disposed of, will break down completely and can then be used to grow more resources. Biodegradable options will eventually break down, but we don't know when and there is no plan to use them for any additional benefit (Because Health, 2019). The biggest misleading information here is the implication that both terms are the same and that the material will dissolve back into nature very soon, when in fact the timeline for a biodegradable material could be years, sometimes decades.

- Ethical
- Sustainable
- Fair trade

One consideration is that altering materials does not change the consumer system. The environmentally polluting materials are not going anywhere even if new materials are invented (although agreeable that the amounts may somewhat decrease globally by introducing bio-materials) and therefore the industry needs to be reviewed as a whole. This is a much bigger problem to address, and I want to begin by looking at current systems and processes that graphic designers are interlinked with in the industry that need to change.

Data

Data is an increasingly large problem in terms of sustainability. With internet globally available and ease of access, websites data has to be saved in large data centres which not only uses a lot of power and electricity in that regard, but these buildings additionally require cooling systems which need even more power. NFT's (non fungible tokens) are increasingly popular for online artwork, but protecting artwork digitally is an incredibly complex process which consumes a lot of time, energy and storage (CBS News, 2021). It is really bad for the environment; the mission to protect artwork in the modern, digital world where everything is easily copied/distributed, has resulted in harming our planet.

Simple techniques to reduce your data impact:

- Improving website findability and optimising loading speed (Donovan, 2021) can reduce the amount of power required to browse the web.
- Measure what your daily/weekly/monthly outputs are as a graphic designer/company in order to identify what areas need improving regarding sustainable processes.
- Reconsider the file sizes you are working with on a daily basis and reduce the size of your design.
- Investigate green cloud providers which can offer alternatives to sharing designs with clients as you work on the project, instead of emailing.
- Create printer friendly website designs.
- Review the equipment you use when designing and consider whether all is necessary; additionally turn off appliances and equipment when not using i.e. overnight or when out of the office.

These suggestions for saving energy won't just benefit the environment, it would enable graphic designers to save money running their business when using electrical equipment. It's also the beginning of the transition of becoming a sustainable graphic designer.

Brand archive findings

Through researching various horror stories regarding sustainable practice and brands not being entirely transparent with their processes, I have discovered that all of the following can be detrimental to a business and result in scandals/very large fines on investigation:

- Excessive company emissions from factory/workers/drivers which can be minimised
- Burning stock in the name of 'exclusivity'
- Greenwashing – plastic that is plant based but still PET plastic so that does not mean better, also different countries mean different percentages of 'plant' ingredients in plastic
- Material sourced in another country with poor labour working conditions, including underage, excessive overtime and unsafe conditions
- Companies shifting the blame as they use subcontractors/buyers/sellers to do the dirty work for them – when they are the ones responsible under the label/brand
- Sending unnecessary emails which creates a carbon footprint
- Pesticides – harming literally everything not just getting rid of one specific disease and doing more harm than good
- Gas, coal and nuclear power which could be switched to solar/wind power
- Greenwashing – when a company 'claims' to be sustainable but does the following: 1. releasing sustainable ranges of products but encouraging the consumer to buy more via marketing/discounts etc., 2. putting thought into the packaging but not workers rights and the other 101 important areas 3. sells a small sustainable range to make it seem as though the whole business is sustainable (but they mainly profit off non-sustainable goods) and 4. look out for words such as 'vegan' which does not necessarily mean products are ethical i.e. plastic
- Large corporations importing illegal materials and also signing up to oppose laws that will expose the company
- Not paying the correct amount of tax or none at all

- Using harmful ingredients when claiming to be safe
- Changing packaging from plastic to an alternative which can't be recycled
- Checking fabrics in garments to avoid plastic based material
- Defeat devices to cheat tests ensuring conditions meet criteria
- Copying artworks/designs i.e. stealing

From doing this archive I have identified that in order to be sustainable as a company, transparency goes a long way. In order for companies to identify and improve their sustainable footprint, companies need to be honest with not just themselves but customers as well. If companies fail to be honest it only backfires later down the line.

Carbon footprint

We've all heard of carbon footprint but what about carbon toe-prints? Author Mike Berners-Lee explains how important fundamental information is regarding sustainability; how companies need to consider the bigger picture (the entire footprint) of their business, instead of just the basic things like print, packaging, using less electricity etc. (the toe-prints). What I have learnt so far in my research (particularly from doing a brand archive) is that there are a lot of companies who only think about the toe-prints and then when the entire footprint is investigated, they get into trouble. This includes but is not limited to: importing illegal materials (IKEA - timber), releasing eco-conscious garments but burning millions £'s of stock (H&M, Burberry etc.) and drivers making 3 separate deliveries to a customer in 3 days, when they could take 3 items in one trip after 48 hours (Amazon Prime).

Looking to other means of inspiration i.e legislation

The top three countries for sustainability as of 2021 are Denmark, Luxembourg and Switzerland. The reason these countries are successful is to do with each of them signing environmental agreements, which involves yearly EPI inspections to ensure they are on track with their sustainable goals. Another reason is also down to the amount of money that country has to spend on improving the way they interact with the environment, such as installing billions of pounds worth of wind farms to generate power.

Look at other effective techniques by other countries i.e. the bottle bill, why can't this be implemented in UK? The UK have introduced the plastic bag charge as one of the first biggest implementers of climate change; when consumers are forced to pay for plastic they will take their own bags for products rather than paying 10p. There is also the psychological guilt that comes with the charge of carrier bags - when you have to pay for it because it's plastic it becomes hard to ignore.

My findings have shown that unless companies see demand from their consumers with sustainable alternatives, or have pressures/legal requirements forced from the government then it's unlikely sustainability will make significant progress quickly within the manufacture/design industries.

Frameworks/policies

- AIGA:
- SGP, the Sustainable Green Printing Partnership:
- BSI, ISO 14001 Environmental Systems Management: Being qualified to a standard surrounding Environmental Management as a company makes you compliant and knowledgeable to clients, whilst also giving leverage above other companies who aren't certified.
- FSSC:

Sustainable material developers/start-ups

My research has shown that sustainable material developers are in discussions with clients months, sometimes even years before graphic design is considered and ready to be implemented. Following discovering this from speaking with graphic designers from several studios, I needed to get in touch with manufacturers who were willing to give me some insight into their production and processes. I was particularly curious to find out what they think about the current process for sustainable production within the industry and whether they think graphic designers could collaborate with them.

Luke Jamieson, director of Aylesbury box company has given me insight into the companies design process as it currently stands, and how they approach sustainability. Surprisingly, Jamieson stated that only 20% of clients request sustainable alternatives to packaging. One of the most interesting insights from our discussion is that the remaining 80% of customers are either unaware of the sustainable material and methods available, or simply haven't considered or factored it into their requirements. In fact, due to Aylesbury box company making the conscious decision to use FSC certified paper/cardboard throughout the whole company (at a worthwhile additional cost - meaning this is also factored into the price the customers pay and is often higher priced than competitors), 80% of clients are choosing the sustainable option regardless. This tells me that given the option, clients will consider sustainable packaging alternatives.

Graphic designers and responsibilities

Sustainable designers/what we can learn from them

When considering the whole process of design, graphic designers must consider Life Cycle Design (LCD), which is the umbrella terminology for the stages of a product's life cycle (Kusz, n.d).

Graphic designers today

Being a graphic designer must mean offering a service that is flexible and caters to client requests. We can advise, we can educate, we can implement within our own workplaces and methods, but we cannot go beyond this.

Service design/customer journey mapping

Identifying the customer journey within Eco-Collective and how I can navigate them within an application.

My discussion with Melissa from MLSK studio was really beneficial to this aspect of my project; it was suggested that in order to seriously consider sustainability it's best to create a database of how to source products and services ethically. This is really important to consider within Eco-Collective as its default operation stems around sourcing other companies and supporting them, whilst changing the consumer goods industry through sustainability. I would need to be entirely sure that if I allowed certain start-ups, small or large business to collaborate together through Eco-Collective, that the outcome would be sustainable for the client.

Summary

In summary, graphic designers and sustainable packaging manufacturers are always going to have difficulties collaborating during the production methods of packaging, however, the industry can be improved and a toolkit can be created to aid with that. Sustainable manufacturers are generally going to need to work with clients but graphic designers being involved in the process in those early stages could benefit not only the client, but the manufacturers, designers, and planet too.

Why my project needed to be created?

I believe that the Eco-collective database is a fundamental toolkit which will be the missing jigsaw piece in the sustainability sector for design. In order for sustainable packaging to be introduced, simply raising awareness around the issue of wasteful and harmful packaging is not enough.

Eco-Collective's database will not only be a source of information for all clients, manufacturers and designers, but will over leverage over competitors in the sustainability sector through certification. Introducing this certification incentive for clients will ensure that consumers of their products can see brands for what they really are, therefore tackling one of the biggest issues within the packaging sector - greenwashing.

How would this change the modern world as we know it, for consumers and designers?...

My project outcome and continual review - 500 words

Eco-Collective's database is in the function of a website/app, which provides a

What is successful about this project?...

What I can be sure of with Eco-Collective through research, is that there is nothing else on the market that offers this fully functioning certifiable database. There are companies such as the Ellen MacArthur Foundation who are exploring sustainability through proposals such as a circular economy, aiming to 'transform every element of our take-make-waste system: how we manage resources, how we make and use products, and what we do with the materials afterwards' (Ellen MacArthur Foundation, 2019).

What can be improved?...

Key

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

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