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

MA Project GDE750
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Introduction

1.1 BACKGROUND

On closer investigation of my overflowing recycling bag contents, I was shocked to learn that the majority of items I thought could be categorised as at-home recycling are not supposed to be. I discovered despite packaging displaying recycling symbols, it does not necessarily mean they are suitable for recycling in regular household weekly collections. Examples of confusing information include: recycling bottle caps only but removing the bottle sleeve, film pouches, trays and sleeves not being recyclable (but the outer package is), fruit and vegetables contained in wrappers that can only be recycled with bags at large supermarket or at local recycling centres, and having to travel to a local tip to dispose of the material correctly. The most frustrating moment was when I had a package of fruit netting with no information on how to sustainably dispose of it, knowing it can severely harm wildlife in landfill.

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. Through research, discussions and interviews with industry experts, I will explore their current processes and methodologies to identify the underlying issue that is causing global impact. As a graphic designer in the United Kingdom, I aim to get to the root of the problem. I need to truly understand my impact in the industry to prevent pollution, educate others and effectively apply sustainable practice.

1.2 MISSION, VISION AND OBJECTIVES

I am proposing to launch Eco-Collective, the first UK database which promotes sustainable manufacturing practice and procedures. The toolkit is in the form of a website and application, which explores a broad range of topics to aid with the sustainable operations of a business. Some of these topics will include information surrounding the following areas of sustainable practice:
• Collaboration and the customer journey
• Resources and supplier chains
• Carbon foot and toe prints
• Incentives and certification

Eco-Collective has one fundamental purpose: to ensure that manufacturers and graphic designers understand the vital role and impact they have by applying sustainable practice. In order for sustainable packaging to circulate, manufacturers and graphic designers must collaborate to advise and recommend environmentally friendly alternatives to clients.

1.3 MARKET AND COMPETITORS

Competitors include: Forest Stewardship Council, Ellen MacArthur Foundation, and the Sustainable Green Printing Partnership as all companies offer sustainable ethics and practice advice, and work with clients to effectively transform the manufacturing and design industries.

Eco-Collective set themselves apart from other consultancies by being transparent and offering certification. Consumers will begin to recognise the Eco-Collective certification and associate those brands with quality, dedication and willingness to reverse the damaging effects of pollution and therefore begin to minimise the affects of wasteful packaging in the industry.

The Problems With Packaging Today

2.1 THE CUSTOMER JOURNEY

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. My discussion with Melissa from MLSK studio was really beneficial to this aspect of my project as we discussed how brands can seriously consider sustainability, and that it is best to create a database of how to source products and services ethically (Whatley, J. 2021a). 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.

Currently, the customer journey is as follows to re-design!!!:

Sustainability blueprint

Process is **disjointed**, in three stages, and client is disconnected
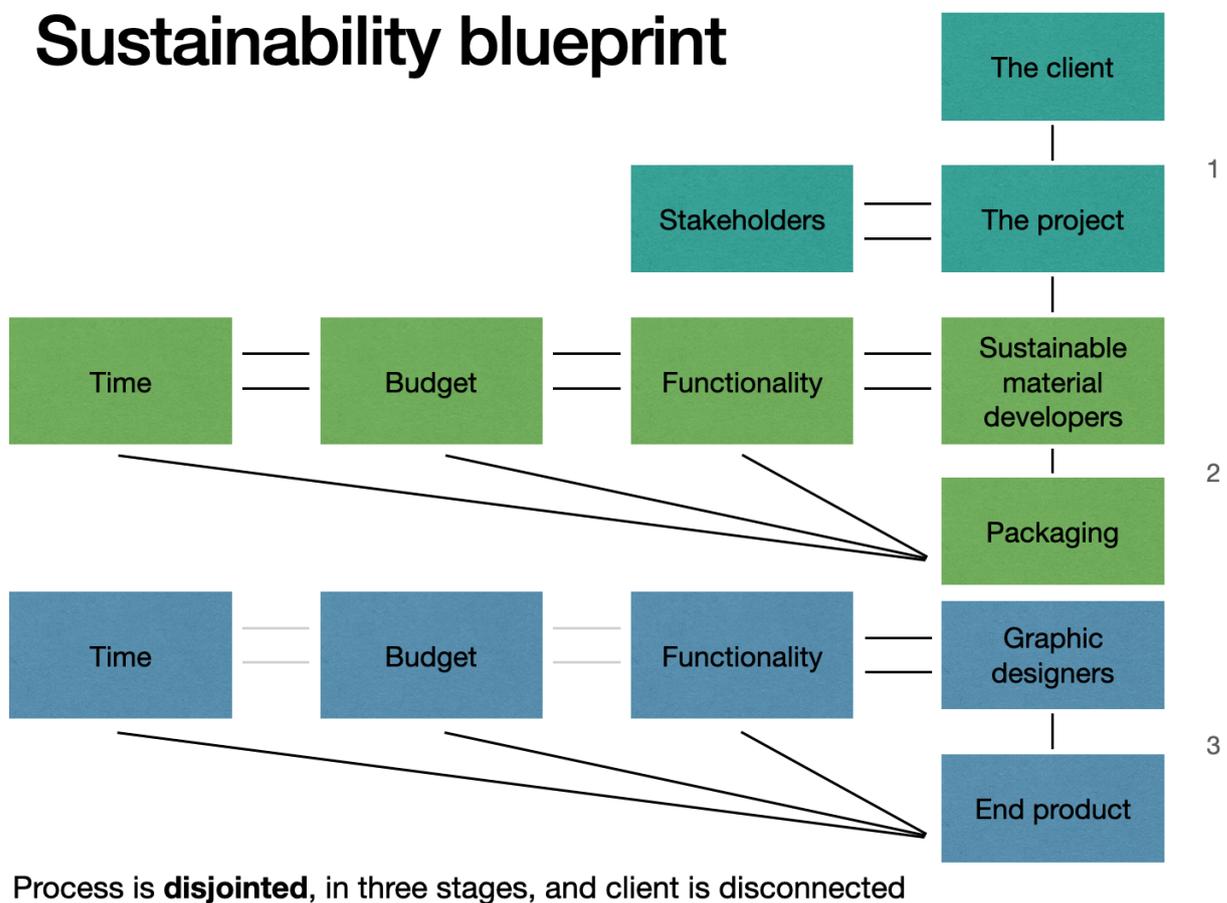
2.2 GRAPHIC DESIGNERS AND MANUFACTURERS

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. Today, 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. So what does this mean? More responsibility, power, more electricity and ultimately more waste.

For me to begin to identify the problem with access surrounding sustainable materials within the graphic design industry, I need to explore print and packaging methods - but look at the bigger picture. Gaining insight into how the industry operates will ensure that as a graphic designer I fully understand the weaknesses in the supply chain and manufacturing systems.

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 have not 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, choosing to operate sustainably at a higher cost does not impact clients decision and generally clients prefer to work with the environmentally conscious company.

From further discussions with sustainable manufacturers such as Aylesbury Box Company 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 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).

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 biomaterials) 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.

2.3 MIXED MESSAGING

"Reduce, recycle and reuse" is a great rule to live by but it will only get us halfway there in terms of saving our planet. We are now at the point of no return - it is no secret that our planet is drowning in plastic and it is predicted by 2050 there will be more microplastics in the ocean than fish (Ellen MacArthur Foundation, n.d.a). Resources such as ink, paper and plastic that are sprinkled at customers to resonate a brand/company need not be wasteful, and materials should be deeply considered in regards to the packaging life cycle.

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 deceitful and misleading advertising can deeply confuse matters. Brands exploit this terminology to market their product to consumers and gain leverage over other competing brands in the market. Sustainable definitions to be aware of sound very similar but they have different meanings. In order for graphic designers to understand the similarities and differences, I am providing examples:
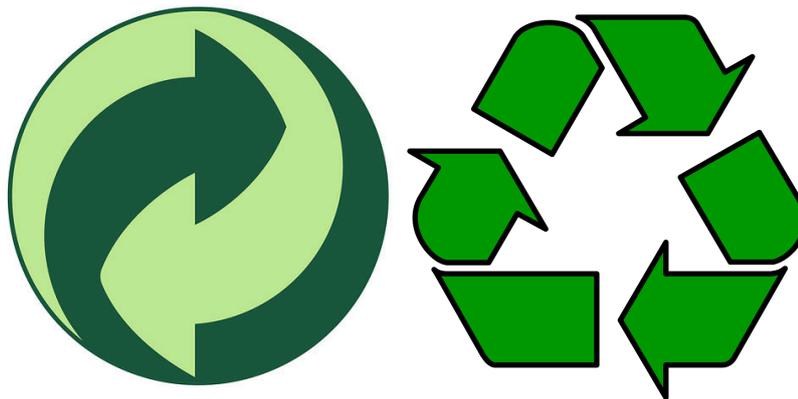
• Recycled
• Recyclable
• Reusable

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).

• Compostable
• Biodegradable

Compostable items, if properly disposed of, will break down completely and can them be used to grow more resources. Biodegradable options will eventually break down, but we do not 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 or sometimes decades.

• Ethical
• Sustainable
• Fairtrade

To be ethical refers to the moral principles of right and wrong, and making eco-conscious decisions in the moment. Ethical practice is "the idea that we are free individuals, able to make our own decisions and take responsibility for our actions" (Roberts, 2020, p.85). The terminology of sustainability refers to long term environmentally friendly applications, and considers the whole footprint of a product or practice. Fairtrade ensures that trading is done correctly and ensuring that supply chains are offering support systems to those involved. Fairtrade "enables businesses – and through them, consumers – to understand the whole supply chain because it is tracked from producer to buyer" (Fairtrade Foundation, 2021).

As outlined in my introduction, mixed messaging can be counterproductive. Like myself, many consumers will see the recycling symbols on packaging and make the assumption that the packaging can be recycled with household recycling collection waste. Unfortunately, this could be doing more harm than good and contaminate the recycling stream, resulting in packaging being sent to landfill or incinerated.

Figure 2: Mobius loop and green dot both display clockwise circular arrows (NS Packaging, 2019).

At a first glance, the Mobius loop, green dot and recycle mark look similar and as if they present the same message (figure 2) when in reality the Mobius loop is the international recycling symbol which indicates if a product can be recycled, and the green dot is used in European countries and indicates that the manufacturer has provided contributions towards costs of recycling the packaging. The recycle mark is used to persuade consumers to recycle if at all possible - yet the similarities between the same arrow symbol but displayed using different colours, arrangements and accompanied with various text really requires consumers to look twice (figure 3).

Figure 3: Widely recycled recycling symbols (ISM Waste & Recycling, 2021).

Currently, sustainable logos are confusing consumers by presenting misleading information. The manufacturing industry is lacking in certification discipline and a much clearer, concise system needs to be present, where symbols are instantaneously acknowledged and a call to action follows.

2.4 UNETHICAL PRACTICE
For graphic designers to understand what makes a company sustainable and how to avoid bad practice, I created an alphabetical brand archive of businesses who have made costly mistakes. Companies who do not carefully review the sustainable outputs of their business as a whole, can ultimately result in legal action.

We have all heard of carbon footprint but what about carbon toe prints? Berners-Lee (2010) explains how important it is for companies to consider the bigger picture (the entire footprint) of their business, instead of just the basic things like print, packaging, and using less electricity (the toe prints). The brand archive explore sustainability as a whole - from looking at labour exploitation and unlawful pesticide use, to companies building cheat devices to pass safety testing.

For the purposes of my project, I am listing a few of these examples below which relate directly to manufacturing, so those in the industry can learn from other companies mistakes:

- Amazon Prime entertains unethical practice by being built on the basis of consumer demand, and the negatives of the service outweigh the positives. The conveniently quick turnaround of getting a package to a customer for same or next day arrival has consequences on the environment. Delivering items separately from one single order results in an employee needlessly driving to the same location more than once, producing at least double the CO2 emissions generated from the vehicles. Amazon are also notorious for using large packaging in relation to the product size. This has a domino effect as more materials are being used by the manufacturer therefore more expensive, employee vehicles are able to store less parcels when making deliveries, and households are needing to dispose of excessive wasteful packaging by travelling to a recycling/landfill centre.
- Burberry found themselves in the spotlight after releasing their annual report in 2018, which declared that "the cost of finished goods physically destroyed in the year was £28.6 million, including £10.4 million of destruction for beauty inventory" (Weinberg and Weinberg, 2018). Fashion is known for being poor with sustainable practice, as companies want to encourage fast fashion as opposed to buying a garment and keeping it for a long time. Fashion brands with the aim to prevent high fashion filtering down the consumer system, simply to keep the brand exclusive is devastatingly wasteful.
- Coca-Cola have a track record of broken sustainable promises (Figure 1). Coca-Cola's Life campaign featuring the plant bottle is one in a long list of brands which use greenwashing terminology as a marketing ploy to gain leverage over their competitors. What they are not telling you is that their alleged innovative sustainable bottle is still 75% plastic (specifically PET plastic which is only recycled in certain factories), and only contains 15% plant based material (Walker, 2013). As a result, Coca-Cola are continuing to release harmful gases into the atmosphere because they have not reviewed their manufacturing process as a whole and avoided the bigger production issue. According to the annual Brand Audit Report, Coca-Cola is the largest packaging manufacturer in the world and also the most destructive: "For the third consecutive year, Coca-Cola emerged as the #1 Top Global Polluter. A total of 13,834 branded Coca-Cola plastics were recorded in 51 countries, reflecting more plastic than the next two top global polluters combined" (Break Free From Plastic, 2021). Instead of using their global presence to make a change and reverse the effects of plastic pollution, they are relying on recycling plantations by continuing to pledge that their bottles are single use plastic and designed to be used once and then disposed of (The Coca-Cola Company, 2021).
- Changing packaging from plastic to an alternative which is not suitable for its purpose can seem ludicrous. Yet, McDonald's famously updated their straws from plastic to paper but at a compromise which does not benefit the environment. These paper straws cannot be recycled when used and end up in landfill. Additionally there has been a rise in complaints from

customers of the fast food chain as the paper straws disintegrate when in use (Jazeera, A. 2019). Although McDonald's have moved in the right direction by reducing plastic, they have not fully considered the durability of the alternative material (in this case paper) which disintegrates when in contact with liquid. This is an example of a company that has not truly considered form and function of the product regarding sustainable alternatives.

- IKEA is the world's largest furniture retailer using timber to produce their famous flat-pack self assembly furniture and have cut ties with their material supplier Vilis LLC in Russia, following controversy surrounding illegally imported timber. According to Earthsight (2021) "…shoppers have been purchasing an IKEA product containing the suspect Russian lumber somewhere on earth every two minutes" resulting in the effect of this sustainable error being a global scale issue. IKEA believed they were trading with FSC certified companies but unfortunately upon investigation and response to Earthsight's report, FSC announced their lease agreements with Vilis LLC had expired (Trushevskaya, 2021). In order to maintain their sustainability promises to consumers, IKEA needed to be reviewing their supply chain certification and ensuring it is valid.
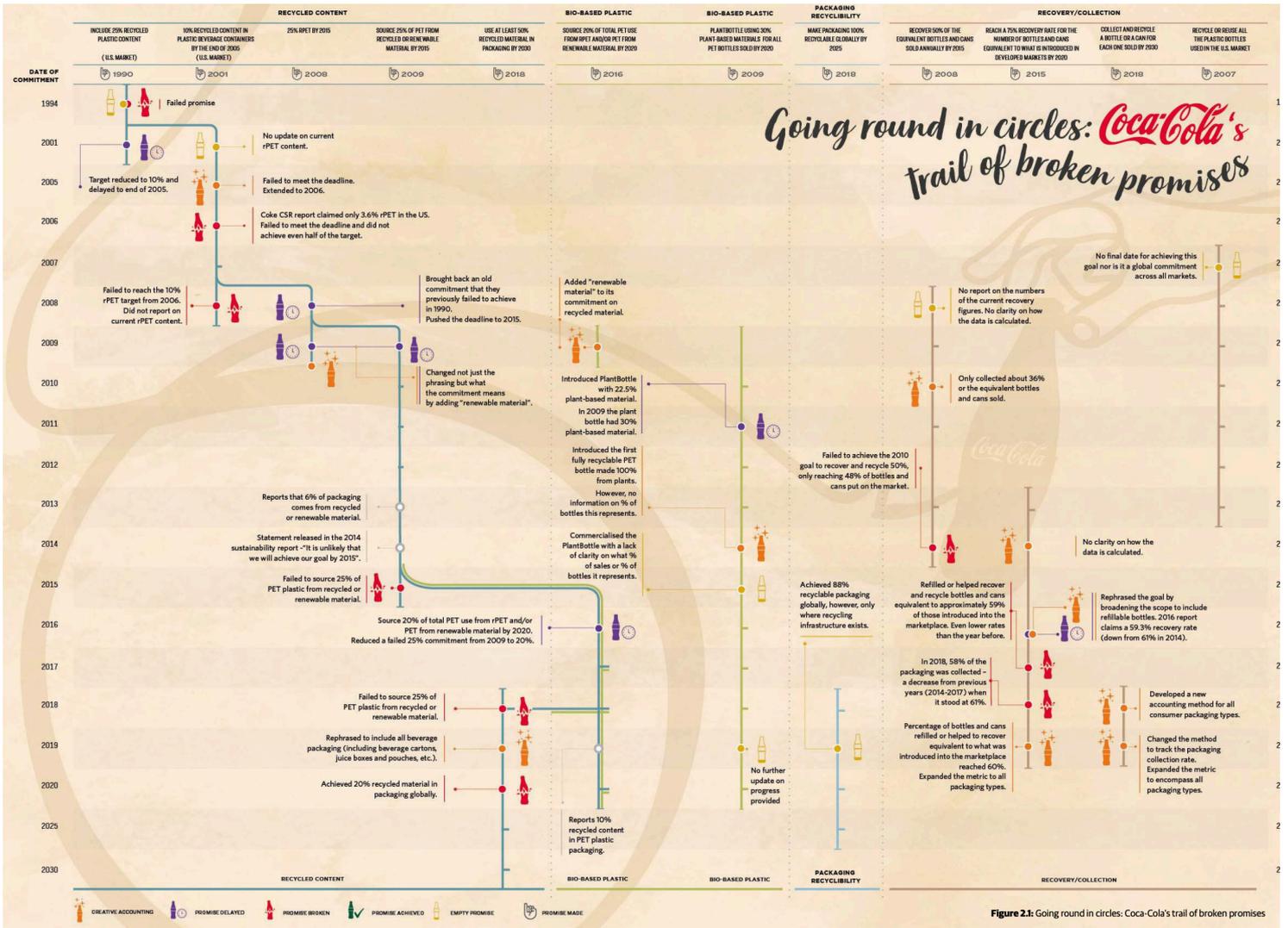
Figure 1: A valuable insight to Coca-Cola breaking sustainable promises (Tangpuori, et al. 2020, p40-41).

- One of the biggest issues is exportation of materials from foreign countries. Material sourced in another country with poor labour working conditions, including illegally employing underage children, excessive overtime and unsafe conditions does not make a company sustainable.
- When a company consistently advertises and releases new products claiming to be sustainable with the notion to attract consumers, this is a red flag that the company are greenwashing and using trends to market their business. H&M fashion retailer is a prime example of this as they have participated in greenwashing as follows:
- 1) Releasing sustainable ranges of products but encouraging the consumer to buy more, and often, offering marketing and discounts
- 2) Putting thought into the packaging but not workers rights and the other 101 important business sustainability areas
- 3) Sells small sustainable ranges to make it seem as though the whole business is sustainable (but they mainly profit off non-sustainable goods)

From doing this archive I have identified that in order to be sustainable as a company, transparency goes a long way. 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 on everybody involved in the supplier chain.

Methods of Sustainable Practice

3.1 PRINT AND PACKAGING

Within the print industry there have been 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 Mirchandani which claims switching from times New Roman to Garamond will save them "400 million dollars" (CNN, 2014). This got people thinking about the impact that ink and paper have on the environment.

"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, … whilst it uses less ink, it uses more paper when comparing fonts like-for-like at the same point size." (Leap, 2020). The quote above explains whilst a typeface may have a thinner weight, it is 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, and time, therefore it has a much larger impact. To make a difference and reduce the amount of paper used when printing, kerning needs to be small, weight needs to be thin/lightweight and sans-serif typefaces use less ink than serifs. Making the type size smaller and reducing spacing is fundamental to reduce amount of printing required.

The first plastic named Parkensine that was bio-based was made from cellulose by Alexander Parkes, in 1862 (Plastics Make it Possible, 2018) which is evidence that developing laboratory tested materials has originated from the 19th century. There has been a huge shift in the last few years with awareness around sustainable alternatives, including many startup companies generating their own biomaterials from vegetables, bacteria and organic matter. For instance, Botanical Inks studio based in Bristol UK, 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).

The quality of packaging does not need to be compromised when opting for sustainable alternatives, according to Ethical Design Co. (2021) "…It can require some additional problem solving if you want to design something for print and have to find creative ways to utilise the page space to save paper – without compromising the impact and strength of the design". Additionally, Whatley, J. (2021a). Packaging voiced that their clients prefer the imperfections that are a result of material testing and may opt for that alternative deliberately as it is unique. However generally, quality of sustainable materials is now much higher and bright white stocks are available, where "there is no compromise on quality" (Whatley, J. (2021a).

Ultimately for most companies, cost is going to be the deciding factor for making sustainable packaging as it will be at the higher end of the pricing scale. This is due to a number of reasons, but mostly offering a higher price is due to how wholesale printing is not considered an option with green alternatives, as they are less in demand. However, as sustainability is growing in awareness and companies are making environmentally conscious decisions, they are generally understanding that overall it is a valuable compromise to make for the benefit of their business, consumers and the environment.

3.2 GRAPHIC DESIGNER RESPONSIBILITIES

When considering packaging design, graphic designers, manufacturers and clients will benefit from considering Life Cycle Design (LCD), which is the umbrella terminology for the life cycle stages of a product (Kusz, n.d). This means considering the afterlife and how the package interacts with industry processes. It looks beyond customer facing design such as materials and print used, and looking at the bigger picture such as storage, production and distribution methods. In addition to the this, graphic designers need to consider the following to implement sustainable practice:
• When designing for the web, ensure whether the website functionality is appropriate for the design and that it does not excessively use more data than is required. Matter of Form (2021)

claim "…to reduce energy wastage we simply need to cut excess kilobytes swamping our pages. …incorporating sustainable design principles into your digital strategy is not just good for the planet, it is also much better for your user experience". Graphic designers need to be mindful of the impact of using large images which take time to load the data, and only use them sparingly.

- Machinery and electricity used needs to be switched off when not in use. Not just obvious things like computers and printers, but any electrical appliances, excessive heating, lighting and water use for instance. The less power required, the more sustainable your business will be long term.
- Make sustainable switches with materials and become dependant on long term, environmentally friendly alternatives that will make a difference. Review the print and packaging process within your business and put systems in place to prevent waste where possible, this could be investing in a recycling station for all your employees or ensuring all of your paper is FSC certified.
- Investigate eco-friendly alternates to ink such as vegetable or soya based inks and water based varnishes. As Curtis Packaging have demonstrated, advise clients about these environmentally friendly alternatives, keep luxury printing finishes to a minimum and reassure the client they can benefit from lower total cost (Whatley, J. 2021a).
- When creating digital design, consider the output and impact when printing. Ensure that all margins, bleeds, rulers and crop marks are appropriately placed so that excessive material waste such as inks and paper, is reduced.
- From my discussions with graphic design studios and packaging manufacturers, it is a fundamental requirement that the client is offered multiple solutions to becoming more sustainable (Whatley, J. 2021b). By doing this, awareness is being raised surrounding environmentally friendly packaging and processes.

3.3 GLOBAL FRAMEWORKS AND POLICIES

Although my proposed consultancy Eco-Collective will be based in the UK, there are several global frameworks and policies which can influence users to ensure they are actively implementing sustainable practice. Legislation can be a long term effective method of implementing sustainable practice and it is important for manufacturers to be aware of such procedures.

For instance, the bottle bill is a government led scheme which is effective in countries such as Michigan, Norway, Germany and Lithuania in encouraging consumers to recycle their packaging. Consumers pay a small additional sum as deposit at point of sale, and then when returning the container they will get their deposit refunded. Scotland is hoped to be the first country to successfully implement this in the UK as of 2022 (BBC News, 2021). Similarly, the UK have introduced the plastic bag charge as one of the first biggest implementers of climate change. When consumers are left with no option but to pay for plastic, they will take their own reusable bags for products rather than paying for new ones. There is a psychological aspect that comes with the charge of packaging and the problem of waste becomes hard to ignore.

However, there is good news. A plastic tax is to be implemented in April 2022 which will apply to plastic manufactured in, or imported into, the UK that does not contain at least 30% recycled plastic. The aim of the government introducing this tax is to persuade businesses to invest in sustainable materials and therefore increase demand (GOV.UK, 2021). Unless companies see large demand from their consumers with sustainable alternatives, or have legal requirements introduced by the government, then it is unlikely sustainability will make significant progress for the time being. This is why it is so crucial that manufacturers and graphic designers are well educated, in order to advise and recommend appropriate action.

To raise awareness and ensure the correct advice and support is distributed within the industry, there are a number of policies available to implement in business practice as follows:
- American Institute of Graphic Arts: The AIGA Design Business and Ethics series gives graphic designers an insight on how to be transparent when creating environmentally friendly design by being wholly responsible and transparent with competitors, clients and consumers.
- Sustainable Green Printing Partnership: The SGP is a collaboration between the entire printing industry to tackle the issue of waste when printing, and showcases a network of certified printers that are operating sustainably for consumers to connect with.
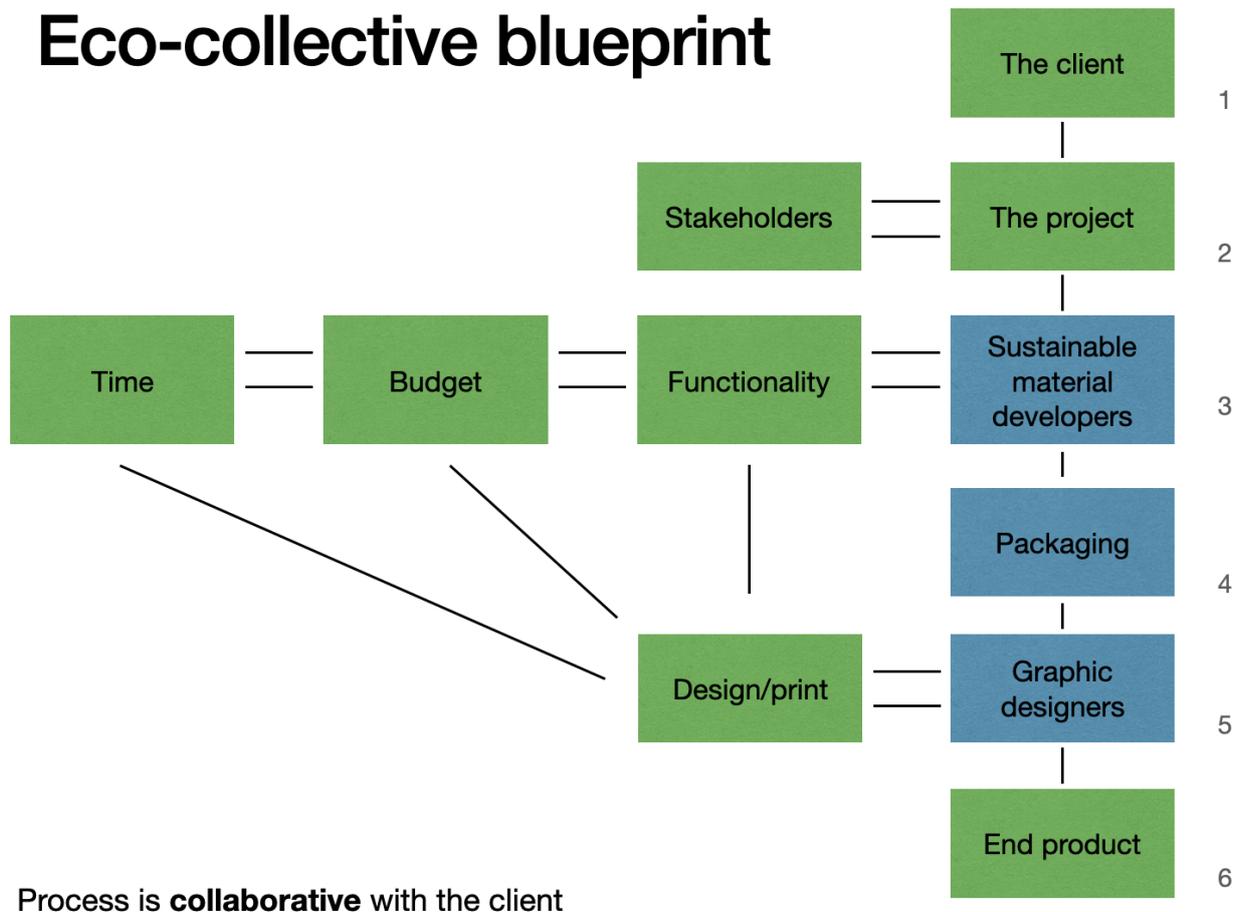
- British Standards Institution: Being qualified to an ISO standard (for example ISO 14001 Environmental Management Systems) as a company makes you compliant and knowledgable to clients, whilst also giving leverage above other companies who are not certified. Undertaking training and audits with BSI ensures that your business are complying with the guidelines of each ISO standard and recognised with Kitemark application on products.
- Forest Stewardship Council: The FSC promote environmentally responsible management of the world's forests, which in turn ensures that nature is fully appreciated and valued. Demonstrating conservation and restoration through modern industry practice is a big step towards reversing irresponsible damage and becoming sustainable. The FSC trademark is a powerful sustainability statement used by companies and recognised by consumers worldwide.

4.1 COLLABORATION AND THE CUSTOMER JOURNEY
Eco-Collective is a web and application based toolkit that will change the customer journey through collaborative working methods. Ensuring that graphic designers work with packaging manufacturers for the duration of the whole project will combine knowledge to generate the best sustainable outcome for clients.

Eco-Collective customer journey (to re-design as packaging and design needs to be together, with graphic designers. Potentially have sustainable manufacturers and graphic designers one level, then output is packaging and design simultaneously as discussions will have happened prior to production):

Eco-collective blueprint

		The client — 1
	Stakeholders — The project — 2	
Time — Budget — Functionality —	Sustainable material developers — 3	
	Packaging — 4	
Design/print — Graphic designers — 5		
	End product — 6	

Process is **collaborative** with the client

4.2 CERTIFICATION AND INCENTIVES
A certification scheme can be introduced to transform the design industry over time, and alter how consumers associate brands with transparency surrounding sustainability. Not only will certification be an incentive for startups who are launching biomaterials and sustainable manufacturing or design to work with others in the industry, but it will also make it possible to become recognised by consumers through introduction of call to action logos.

When considering packaging design, graphic designers, manufacturers and clients will benefit from considering Life Cycle Design (LCD), which is the umbrella terminology for the life cycle stages of a product (Kusz, n.d). This means considering the afterlife and how the package interacts with industry processes. It looks beyond customer facing design such as materials and print used, and looking at the bigger picture such as storage, production and distribution methods.

In addition to this, graphic designers need to consider the following:
• Whether the website functionality is appropriate for the design and isn't excessively using more data than is required. Matter of Form (2021) claim "…to reduce energy wastage we simply need to cut excess kilobytes swamping our pages. …incorporating sustainable design principles into your digital strategy is not just good for the planet, it is also much better for your user experience". Designers need to be mindful of the impact of using large images which take time to load the data, and only use them sparingly.
• Machinery and electricity used needs to be switched off when not in use. Not just obvious things like computers/printers, but any electrical appliances, excessive heating/lighting/water use for instance. The less power required, the more sustainable your business will be.
• Make sustainable switches with materials and become dependant on long term, environmentally friendly alternatives that will make a difference. Review the print and packaging process within your business and put systems in place to prevent waste where possible, this could be investing in a recycling station for all your employees or ensuring all of your paper is FSC certified.
• Investigate eco-friendly alternates to ink such as vegetable or soya based inks and water based varnishes and suggest that
• When creating digital design, consider the output and impact when printing. Ensure that all margins, bleeds, rulers and crop marks are appropriately placed so that excessive material waste is generated such as ink and paper.
• From my discussions with graphic design studios and packaging manufacturers, it is a fundamental requirement that the client is offered multiple solutions to becoming more sustainable (Whatley, J. 2021b). By doing this, awareness is being raised surrounding environmentally friendly packaging and processes.

4.3 INNOVATIVE STRATEGY

I believe that the Eco-collective database is a fundamental toolkit which will be the missing jigsaw piece in the sustainability sector for packaging design. For mass sustainable packaging to be introduced to consumers so that we are preventing greenwashing and transforming the unlawfulness of branding, simply raising awareness around the issue of wasteful and harmful packaging is not enough. Additionally from exploring legislation it is clear that unless governments and parliaments impose strict laws on packaging, and consumer demand changes overnight to call out greenwashing, companies do not have the need to alter their methods of production.

Therefore, Eco-Collective needs to be providing an incentive. The Eco-Collective 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. Transforming the way consumerism is approached, will be one of the vital keys in this project. When a customer goes shopping at their local supermarket and is deciding between two brands based on sustainability factor, that customer needs to choose the brand that is being transparent and making a difference. This is how Eco-Collective can begin to transform the industry; when brands realise that they have lost out to a certified sustainable competitor they will want to become certified as well.

4.4 NETWORKING AND OPPORTUNITIES

The Eco-Collective database is in the function of a low data powered website and application, which provides a transparent catalogue of sustainable information varying from ethical brands, to the application of sustainable strategies within a business. Ensuring that this database is easily accessible and available online in the UK can open up the possibilities that eventually, Eco-Collective could branch out and expand to become a global network.

What is successful with Eco-Collective is that through research I identified that there is nothing else on the market that offers a fully functioning database with the added certification aspect. There are active companies such as the Ellen MacArthur Foundation who are exploring sustainability through circular economy proposals, 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, n.d.b) yet they are not tackling

the issue of how to put a stop to greenwashing once and for all. I believe Eco-Collective is in a strong position in the manufacturing industry by offering collaboration, ensuring manufacturers and graphic designer relationships are interlinked and think this is the fundamental first step in transforming the packaging industry through sustainable design.

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