3rCup

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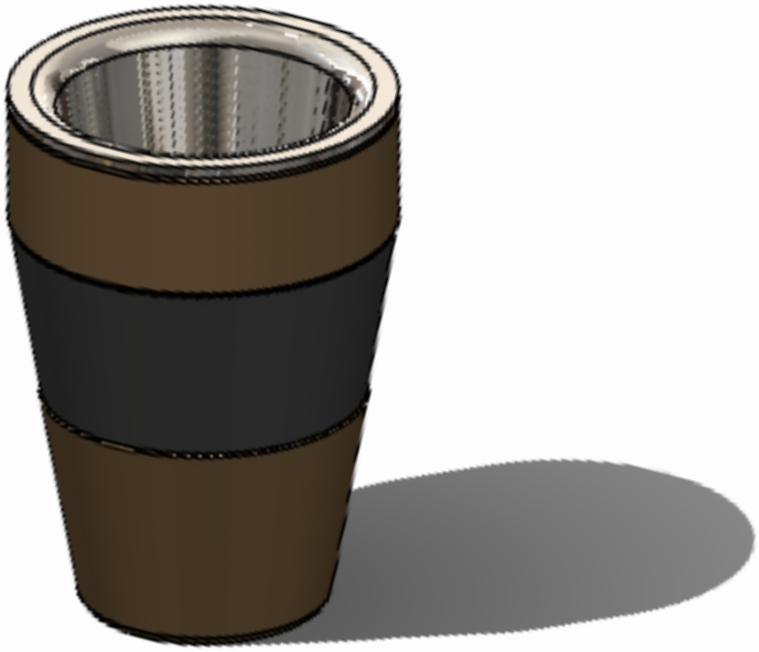
Abstract

100% recyclable or 100% made of recycled plastic are the words that we read the most on everyday products. Non-recycled materials are limited to the bare minimum, but the industry has been focusing mainly on plastic. The main reason is that the world only recycles 9% percent of plastic, according to the Organization of Economic Development (OECD, 2022), dumping in landfills more than 50% of it.

However, the world needs to be aware of the fact that other substances and product are being disposed at an uncontrollable rate, most of the time without any alternative to their end-of-life, such as tyres.

This report aims to design a 100% recyclable and 100% made of recycled materials reusable cup of high-quality materials from a controlled supply chain. As a matter of fact people's awareness is often opposite to their shaky trust in the process that brough disposed plastic into the product they are holding in their hands.

The 3rCup not only is a eco-friendly cup that cares about the environment, but also a responsible company that takes care of the raw materials from the moment they are inputted into the supply chain until their end-of-life – which is not represented by the end of life of their product – but the end of life of the material as it is not recyclable anymore.



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Introduction

Background

Disposable biodegradable cups and reusable cups made of recycled materials are the sustainable alternative to disposable plastic cups. However, the market and the majority of the brands have been producing cups from recycled plastic, as it is one of the most disposed and pollutant material worldwide. Other materials need to be considered too, such as recycled rubber coming from disposed tyres, as a material that is highly resistant and has insulating properties.

According to the European Tyre and Rubber Manufacturer Association (ETRMA), the 76% of the natural rubber produced globally is used by the tyre industry. In Europe 100% of the natural rubber is imported from Indonesia, Thailand, and Malaysia. The problem is that this product is hard to replace and therefore it is important to recycle it. In 2019 the EU classified natural rubber as a Critical Raw Material, switching the 20% of the imports from Asia to Africa (European Commission, 2019), and focused its research in alternatives to Hevea (rubber tree).

Alongside the scarcity of the raw substances, the disposal of rubber has always been an issue. Every year 1.5 billion tyres are driven to their end-of-life which is often the landfill (Earthbound, 2017). This is the second reason, fully detailed in the Business Case, why this material has been chosen to produce the cup. The landfill of Kuwait is a major environmental cemetery for tyres, whose worrying dimensions can be seen from the space (see Figure 1).

Figure 1 Kuwait landfill

Two thirds of the total consumption of synthetic rubber worldwide is due to tires and tubes, while only one third is due to other general rubber goods manufactured. In total, in 2020, 649,610 metric tons of rubber where consumed (Statista, 2021).

The EU Landfill Directive made it illegal to abandon tyres in landfills in 1999, but still, it occurs that the tyres may end up incinerated illegally causing pollution and air acidification (European Union, 1999).

Aim and objectives

The aim of this report is to develop an insulated cup, capable of retaining the heat and be 100% made of recycled and recyclable materials, repurposing the product at its end of life. The main aim is to make an eco-friendly and sustainable circular product.

The objective is to design the cup's entire life cycle, from early stages to the market. The objectives are the following:

1. Analyse the current situation and other proposed solutions in the market
1. Propose a design that represents an improvement of the current scenario
2. Carry out the life cycle analysis and assess the impact of the product
3. Define a business model
4. Identify limitations and future works that can be done on the product

Organization of the report

The report is organized as follows: after the problem statement outlined in the Introduction, Tools and models section presents the software used to design the product and the methodology used to assess the environmental impact from "cradle-to-cradle" of it.

Further, a business case is proposed in the section *Business Case*, where the supply chain is detailed. Finally, after the finance of the company is estimated in section *Costs & Budget*, a summary of the report is given.

Tools and models

The tool used to design the product is SolidWorks, a software for modelling computer-aided design (CAD) applications. A 2D technique drawing sheet specification of the product can be found in the Appendix.

LCA is one of the methodologies used to evaluate the environmental impact of a product over its life cycle, from the source of raw material to their end-of-life and disposal. The aim of the methodology is to understand in which proportion a product or a service contributes to the global environmental footprint and how it is possible to improve the sustainability and reduce the impact (Muralikrishna, 2017).

The LCA methodology is established and regulated by the ISO standards 14040 and 14044. The stages of the LCA include:

1. Design
2. Raw materials and manufacturing (including packaging)
3. Distribution
4. Use
5. Disassembly and repair
6. Recycling

SolidWorks has an integrated LCA tool that can evaluate the environmental impact of the product and its carbon footprint. The impact calculated by the software through a CML methodology. To reduce uncertainty, CML 2001 limits the quantitative analysis to the early stages – manufacturing and distribution – of the supply chain (Guinée, 2002).

A Sustainability Report is generated with a specification of the air acidification, carbon footprint, eutrophication of water, and total energy consumption.

Life-Cycle Analysis

The detailed diagram of the LCA of the product can be seen in Figure 2. The LCA of the reusable cup is assessed from 'cradle-to-cradle', studying how the selected raw materials are processed, used and then given back to the environment for a reintegration in the life-cycle.

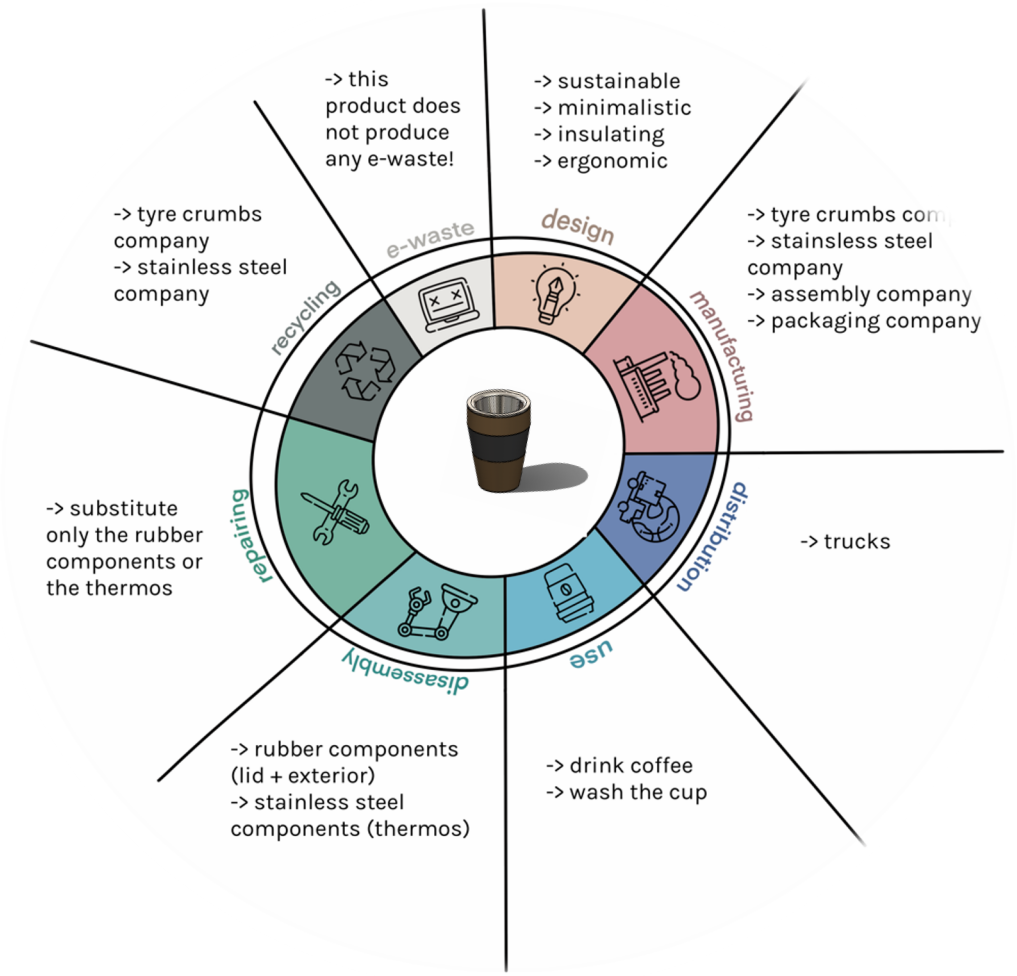

Figure 2 LCA of the 3rCup

Design

The reusable cup is made by three main components: the lid, the internal cup, and the external coverage.

Figure 3: Reusable Cup

The design of the product is the result of a whole system and lifecycle thinking analysis, that answers the following questions:

1. What are the key requirements expressed by users for a cup?

A cup is a pretty straight-forward object: usually for users a cup should be big enough to host a decent amount of liquid (could be coffee, milk, tea, hot chocolate) which, most of the time, is a hot beverage. For this reason, the next requirement for this object is to be able to preserve heat and not be heavy, as the cups may be carried around on the way to someone's workplace.

2. How can I make a cup more sustainable?

There are two ways of making a cup: either disposable or reusable, and there are two ways of making a cup more sustainable: either biodegradable or made of recycled materials (or both). Biodegradable cups, though, cannot be reused, and therefore the solution is to make a reusable cup that can be washed and reused multiple times. Often the reusable cups that can be found on the market are made most of the time from recycled plastic and do not consider other materials, such as rubber. In addition, they are not always 100% recyclable or able to preserve the heat.

3. What are the requirements of the cup solution in relation to the needs of the users and the environment?

Cups should be made of sustainable materials, while maintaining an intriguing design and appearance so that the customer's expectations would be satisfied. The design of the cup should be ergonomic and simple, to convey practicality. Finally,

according to the main objective of the product design, the product should be as much eco-friendly as possible: made from recycled and recyclable materials.

4. What are the key health and safety features that should be incorporated into a new cup concept?

The cup should be made of a non-toxic and food-suitable material, to put beverages in it.

5. What are the key sustainable design principles that should be considered for this solution?

Table 1 Selected sustainable design principles

Energy	Materials	Lifetime
Clean renewable source **Reduce energy losses** Improved controls **Right-size components** **Improved logistics**	Use less material **Recycle materials** **Avoid toxics** Embodied energy Embodied resources	**Durability** **Recyclability** Repair & Upgrade **Reuse & Re-manufacturing** Product Stewardship

6. What are the specific materials and manufacturing processes that need to be sourced and considered?

The manufacturing should consider the production of a thermos cup, external coverage and a lid.

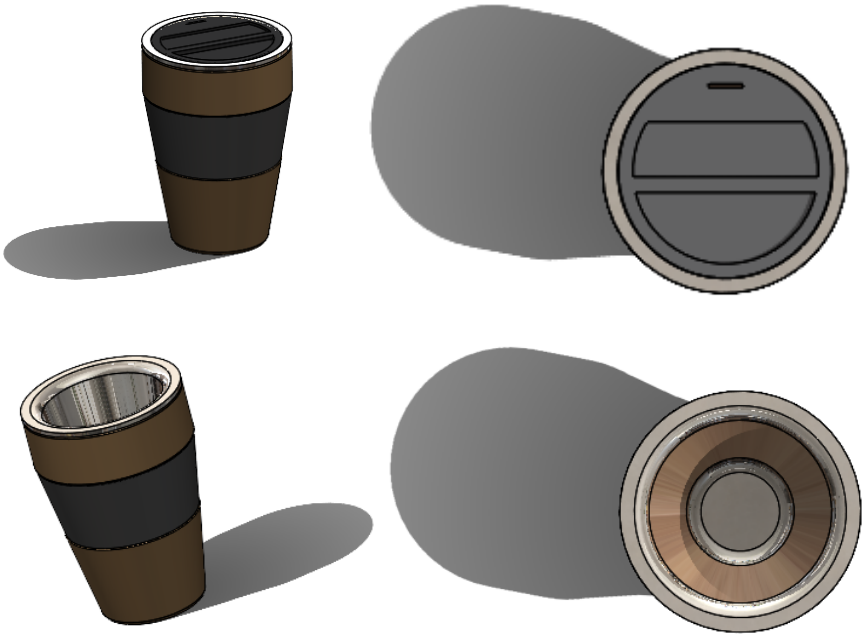

Figure 4 3rCup with and without lid

Raw material and manufacturing

The product requires two different materials for the components: Styrene-Butadiene rubber (SBR) and SS 304 (Stainless Steel).

Rubber

The main product used to realize the cup is recycled rubber (it accounts for about the 80% of the cup). Rubber is a versatile raw material that has been used in many different fields, from agriculture to the infrastructure industry, from playground surfaces to home furniture, but not as much as in tyre production.

Styrene-butadiene rubber is a synthetic rubber used for many different purposes: from pneumatic tyres to chewing gum (Zhang, 2005). According to Statista (2021) the market size of SBR accounts for 10.24 US billion dollars and is expected to reach 16.58 US billion dollars in 2025.

The reasons behind the choice of this material are two. The first one is the excellent chemicals and physical qualities of the material, which makes it one of the best thermal insulating materials. SBR has similar qualities to natural rubber, but it is more resistant to water, heat (-50/+100 °C), and heat ageing (Elbex, 2017).

Therefore, the solution to produce the reusable cup proposed is to recycle tyres to obtain rubber crumbs. Tyre recycling can be challenging, as tyres are made of a combination of different materials, synthetic and natural rubbers, and they need to be treated and cleaned before their re-use and re-introduction in the circular economy.

In Figure 5 it is possible to see the typical composition of tyres.

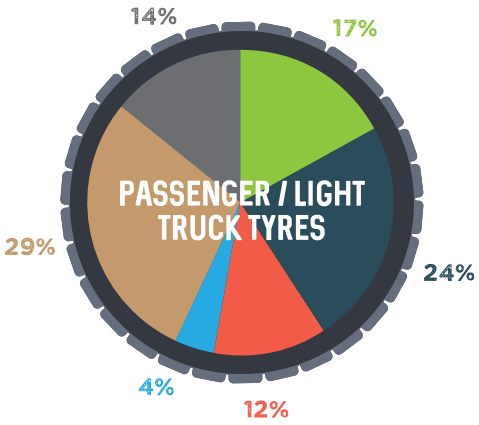

Figure 5 Tyre composition

Regarding the health safety of SBR, several studies proved that it is a safe substance. Relevant studies are the one conducted by Peterson et al. (2018), Bleyer (2017), Wiesman et al. (2017) and ECHA (2017).

The material is standardized by the standard ISO 2322:2014.

Regarding the manufacturing of this material, recycled tire crumb rubber manufacturing process generates 0.79 metric tons of CO2 equivalents (Lehigh Technologies, 2007).

According to the EPA's Waste Reduction Model (WARM), that defines the process of recycling tyres into crumbs, assessed that using recycled tyres instead of manufacturing new rubber has a carbon footprint of -0.39 metric tons of CO2 equivalents.

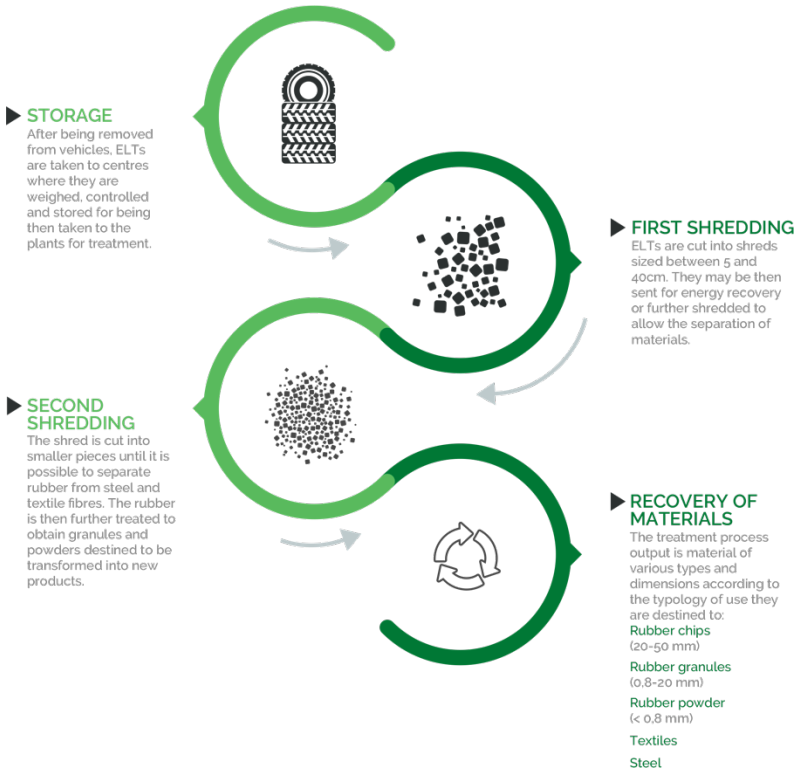

Figure 6 Process of tyre recycling to raw material

Stainless Steel

Stainless steel is an alloy resistant to corrosion, made by the mix of iron, chromium (minimum of 11%) and nickel (Davis, 1994).

Stainless steel is considered the “green material” by excellence, as it is fully and infinitely recyclable. The applications of this material range from kitchen utensils to the car industry. SS304 is durable and highly resistant (up to 800°C), hygienic and aesthetically pleasant. Thanks to these properties and its resistance to corrosion, it is the ideal material to be used in kitchens (Aperam, 2019).

The composition of this alloy is standardized by the British Standard (2005) and the ISO 15510.

Manufacturing

The manufacturing of the product is in the United Kingdom. Three main industries are involved: the industry that provides rubber crumbs, the industry that provides stainless steel and the industry of the assembly. Overall, the total amount of energy used in the assembly process was estimated to be 0.05 kWh.

The data was sourced by the LCA conducted by the competitor's product KeepCup (2018) on its products in three different manufacturing regions, including the United Kingdom. Since the industries are all based in the UK, the costs of transportation related to the manufacturing are negligible.

Figure 7: Manufacturing and distribution regions

The choice of manufacturing region is important, as it determines the energy sources and technologies used in the modelled material creation and manufacturing steps of the product's life cycle.

Packaging

The packaging of the product is made of recycled cardboard and paper: the packaging is 100% recyclable as the product that it is wrapped within.
The packages are purchased in the UK.

Distribution

The use region is used to determine the energy sources consumed during the product's use phase and the destination for the product at its end-of-life. Together with the manufacturing region, the use region is also used to estimate the environmental impacts associated with transporting the product from its manufacturing location to its use location.

The product is distributed in Europe, mainly in England, through trucks that drive for approximately 1900 km to distribute the product.

According to Webfleet Solutions (2020), we can estimate a truck to consume from 30 to 40 litres of diesel each 100 km, therefore the total consumption would be of 6650 litres of diesel. Using the EPA calculator for GHG emissions, the distribution produces 15.6 metric tons of CO_2 equivalents.

Use

The product is built to last five years, but the average years assumed for using this reusable cup are 3: many factors must be considered for the estimation, such as the changing of trends and consumerist behaviour of customers, that could potentially substitute the cup before time.

Supposing an intense use of the cup for 3 hot beverages per day, this means that yearly the cup would be used 1095 times a year, for a total of 5475 times by its end-of-life. The use of the product implies the use of water for washing if the washing is performed manually, otherwise if the product is washed in the dishwasher, then both water and electricity would be consumed.

According to the assessments made by the KeepCup (2018) company on its product, the impacts of the washing of the cup are detailed in Table 1.

Table 2: CO_2 consumption for cup usage (KeepCUp, 2018)

Method	Input	Amount	Assumptions and references
Dishwashing	Water (l)	0.3	Assumed 15l/load and 50 cups/load (Gall, 2016)
	Electricity (kWh)	0.025	Assumed 1.23 kWh/load and 50 cups/load (Gall, 2016)
Handwashing (warm)	Water (l)	0.5	Assumed a tap debit of 14.6 l/min and a 2 second rinse (Western Water, 2015).
	Natural gas heating (MJ)	0.084	Assumed natural gas needed to heat water from 25° to 65°
Rinsing (cold)	Water (l)	0.5	Assumed a tap debit of 16.5 l/min and a 15 second rinse (Australian Government, 2017)

Disassembly and repair

If the product needs to be repaired, it can be easily disassembled in two main components: the exterior coverage in rubber and the inside cup in SS304. Both pieces can be repaired and then replaced on the original cup.

End-of-life

The product is 100% recyclable. At the end of its life the product is disassembled into two main groups: the rubber-based components and the stainless-steel cup. The parts are returned to the industries that recycle rubber and stainless steel respectively to re-input the used components in the lifecycle as recycled raw materials.

Environmental impact

The total environmental impact calculated by the software through a CML methodology is the following. The tool does not include the usage consumptions, but only the consumptions related to the manufacturing of the cup.

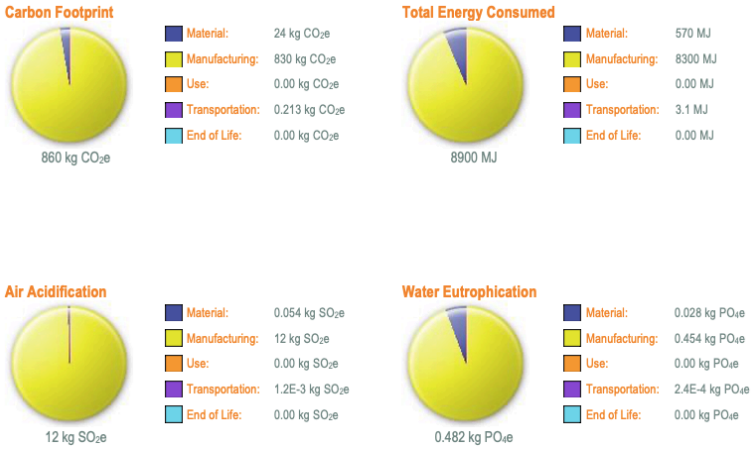

Figure 8: Environmental impact of the reusable cup

The manufacturing of the product is the part that generates the most environmental impact, as can be seen from Figure 8. Once the manufacturing of recycled rubber is assessed and as the chemical industry advances, new methods for preparing the raw material for recycling can be used.

Business case

In this section a business plan is presented to minimize the risk and define the costs of investing in the production and realization of the reusable cup. For a business to flourish is necessary to have a predefined and well structure of where it is going and at which cost.

Designing an effective business model is challenging: many variables are involved – some of them are explicit, other implicit, and their changing is constant, as the evolution of the market. The competition is always at the door and the exponential rate at which technology develops represent both an opportunity and a threat (Young, 1997).

Business model

To outline the business model, the business model canvas template was used (Osterwalder, 2010). The template describes in an effective way the nine components that define the way a company intends to generate profit.

The business model canvas for the reusable cup can be found in Appendix.

Costumer segment

Demographic segmentation: The who.

In the analysis of demographic segmentation, identifiable non-character traits are specified (age, gender, ethnicity, religion, profession, etc.)

The people who are more likely to buy this product are smart people who have a high sense of responsibility towards sustainability, as this product is not a necessity good. Age and gender are not relevant, even if the product is expected to be sold to younger generation. These people would be either people who work in an office, students, or people that would take this cup on their way to go.

Psychographic segmentation: The why

In the analysis of demographic segmentation, traits such as hobbies, life goals, values, beliefs of the costumer are specified.

The people who purchase this product are environmentalist or strongly care about the environment, and at the same time they are paying a detailed attention to the aesthetic of his/her surroundings. Ideally, these people follow a vegan or minimalistic lifestyle, with an interest in travel and excursions.

Geographic segmentation: The where

There is no segmentation at this level. As the product, at least initially, will only be sold in the UK. Further, other markets where the recycling of the tyre is needed, will be considered.

Behavioural segmentation: The how

Behavioural segmentation groups costumers according to their spending and purchasing habits, and loyalty to the brand. Ideally, the people who buy this product are spenders (choosing high quality investments over low quality cheap buys).

Value proposition

The cup proposed in a reusable cup that does not only focuses on the recyclable product of plastic. The design is minimalistic and captivating, in color blocks, and maybe in the future, also customizable.

- NEWNESS → this cup is a unique model of a rubber recycled cup that is not present on the market nowadays.
- USABILITY/DESIGN → the design is linear and simple, minimalist
- PERFORMANCE → the cup can maintain beverages hot due to the high insulating material used, the product will come from a controlled supply chain that takes care of the raw materials involved in the life-cycle of the cup from the moment they are inserted in the business until their disposal.

Channels

Own and direct

Web sales: open a website of the brand/company and sell directly to the customer.

1. Awareness: social media, paid promotions, photo and video marketing
2. Evaluation: influencer marketing
3. After-sale: subscription to a newsletter, life-time repair support or discount on the second cup

Partner and indirect

Partner store: selected store resells our product, ideally brands that envision the same values.

1. Awareness: social media, paid promotions, photo and video marketing
2. Evaluation: influencer marketing
3. After-sale: physical discount on the next cup, lifetime support, reminder to the website

Customer relationship

Personal assistance, communities and co-creation. This type of relationship will help the customer make him feel involved in the process (like if the product was delivered from one person directly to another). The idea is to sell the product only a few times in a lifetime to a single person.

Revenue stream

Asset sale (fixed menu pricing).

Key resources

1. Physical: manufacturing facilities where to produce the product and warehouse (external)
2. Intellectual: brands, copyrights, partnerships, and customer databases (internal)
3. Human: designers and marketing agents (internal)

Key activities

Production and platform/network: after the manufacturing of the product (production and logistic), the next most important step is to try to conquer people's heart and convince them to use the product. So, focus on engagement and community building.

- Youtube sponsorship and unboxing
- Instagram influencers
- Identify shop to resell the product

Key partnership

Optimization and economy of scale. Especially in the production phase, since our brand only produces this product, it does not make sense to hold the whole manufacturing infrastructure

Reduction of risk and uncertainty. Influencers and media to build a community.

Resellers.

Cost structure

This product is value-driven.

- Promoting on social media (influencers and promotions)
- Promoting on reselling
- Website
- Strong marketing campaign
- Costs of manufacturing

Supply Chain Drivers

A supply chain is the network or path of resources needed to bring a product to life and to the costumers.

Phase I: Define a supply chain strategy/design

The stages of the supply chain are summarised in Appendix and detailed below:

Facilities. The raw materials are outsourced from companies in the UK, the assembly of the product is also outsourced as, the investment of opening a new warehouse only to produce the cup would be too high. From the production, the product will be distributed directly to the market, making the product available online and in shops. Now, in UK, there are more than 370 business that recycle tyres and rubber.

The supply chain should support the shipping of the products all over the world, to influencers, tiktokers and people who purchase the product online. Also, since this is a 100% recyclable product, the manufacturing companies involved in the process should adopt the same philosophy of the brand and embrace a minimal use of the resources.

The competition of the product is going to be tough: there are already many reusable cups on the market, but most of the focus is on plastic material. Therefore, a new

product made from recycled material, that has also a conscious end of life, will be produced.

Table 3 Competitors

Image	Brand	Features
	Ecoffee Cup	Bamboo-based cup
	Circular&Co – Circular NOW Cup	100% paper-based cup
	KeepCup Cork Brew Reusable Glass Coffee Cup 12oz	Glass-cork recyclable cup

The strategy to grow is to start producing a limited number of items and then wait for the market to react to this product few weeks, as the product begins to be sold, keep producing at the same rate of the demand.

Phase II: Define the regional facility configuration

The product facilities will be all located in the UK, as in the UK there is a managed free market for tyres. Therefore, the companies collaborate between each other with best practices for the good of the environment. At a regional level, the main warehouse should be positioned near commercial hubs such as Manchester (West Yorkshire).

Phase III: Location choices

The headquarters are located in Leeds, UK (4-5) people, with the assembly factory. The suppliers factories are located all over England (the rubber crumbs and stainless steel are purchased, and contracts are made according to the most convenient solution of the market at the moment).

Sources and costumers

Phase I: Classification

The strategic components of the supply chain are the producers of the raw material. Recycling tyres and stainless steel is fundamental for the production of the cup. The main provider of the rubber crumbs is Polybound®, that provides a quality-certified product. For the stainless steel, the company identified is Premier Metals®. Both companies are located in West Yorkshire, UK.

Phase II: Market Analysis

In case of disruption, other companies can be easily identified and selected to substitute the initial companies.

Supply Risk→ Impact on Business ↓	Low	High
High	Leverage Items: Best Deal Marketing and promotion, resellers	Strategic Items: Cooperation SS and SBR (multiple suppliers available)
Low	Non-Critical: Efficiency Packaging and distribution	Bottleneck Items: Supply Continuity Warehouse that performs the assembly of the product

Phase III: Strategic Positioning

The main strength of the rubber supplier is its outstanding product quality and product range. It is one of the UK's leading companies, it produces 100% recycled rubber crumbs. Moreover, the company offers a lifetime quality guarantee over its products. The prices are competitive and the company is high qualified.

Regarding West Yorkshire Steel Ltd®, the company was established in the 1945 and therefore has an high expertise on the recycling and production of the material. The company maintains an effective and efficient Quality Management System based upon the requirements of BS EN ISO 9001:2015.

Phase IV: Action Plans

The main risk is represented by the raw material suppliers: the key activity is to find quality materials and reliable suppliers to provide a valuable product to the final costumers. Therefore, after the choice of the suppliers, an effort should be put in order to preserve the relationship with the suppliers.

The lowest risk is represented by the distribution and selling of the product. In this sector, there is high uncertainty for sure, but also a lot of possibilities and potential. Many different resellers could be involved in the process, not only shops but also cafés. Places such as Caffè Nero, Starbucks, Costa Coffee and similar could be involved in the reselling. The cup could be also suitable as gadget of events and conferences eco-friendly oriented or environmental related.

A consistent investment could be considered for the social platforms such as Instagram, Youtube and Tiktok, to make the product go viral along with sustainability topics. Unboxing, paid promotions and reviews could highly demonstrate to the online public the quality of the product and its uniqueness.

In addition, the sellers will also be responsible of the collection of the material. A key activity that could be performed is the collection of the used cup for a 60% off the new one. In this way, it is possible to make sure the material is recycled in the best way possible.

Cash & Budgets

Governance and Finance

The company and the brand will align under the name of 3rCupr®.

The name of the brand conveys a strong message: the 3R stands for both the 3R Initiative proposed by the G8 Summit of 2004, but also stands for the main features of the cup: Recycled, Reusable and Rubber.

The company, a Ltd company, will take a loan to invest in the production of the cup. As a high sustainable and environmental conscious project, fundings will be asked both to the European Union, to ETRMA and the company will accept any donation from philanthropists.

Three people will be involved in the initial project: two shareholders (one in charge of the marketing area, one in charge of the manufacturing process) will be coordinated by a CEO, that will assure the smoothness of the supply chain.

Costs

Resource	Cost	Type
SBR	~£1.5 / kg	Direct
SS304	~£3 / kg	Direct
Manufacturing		Direct
Distribution		Direct
Marketing	~£5,000	Indirect
Promotions	~£200	Indirect
Employees	~£1,700 / person	Indirect
Insurance		Indirect

The Table summarizes the main costs necessaries and some estimates based on real markets in the UK.

Considering the competitor's prices, the cost of the cup is suitable. The added value that is implied in the price is the controlled supply chain of the product.

Retail price

Considering a taxing of 22% and a utility of 15%, considering the price of the competitors the final price for retail would be £8.99.

Conclusions

With the increasing awareness in sustainability matters, companies are starting to embrace circular economy. More and more materials are being recycled and repurposed for a new use. It is important to take advantage of this times in which people are open to act in favour of our planet and address the right causes. Choosing widely used recycled materials and assessed methodologies worrying about the economic income its simple, but the real challenge is to think outside of the box and investigate new innovative ways to recycle all the waste that we produce, starting from saturated markets.

Alongside with the introduction in the market of this new product, improvement can be made with restrictions towards product not coming from recycled materials. Imposing restrictions like the UE 2019/904 SUP (Single Use Plastic) imposed by the European Union to all the Member State in the manufacturing of single use plastic product should become a standard worldwide.

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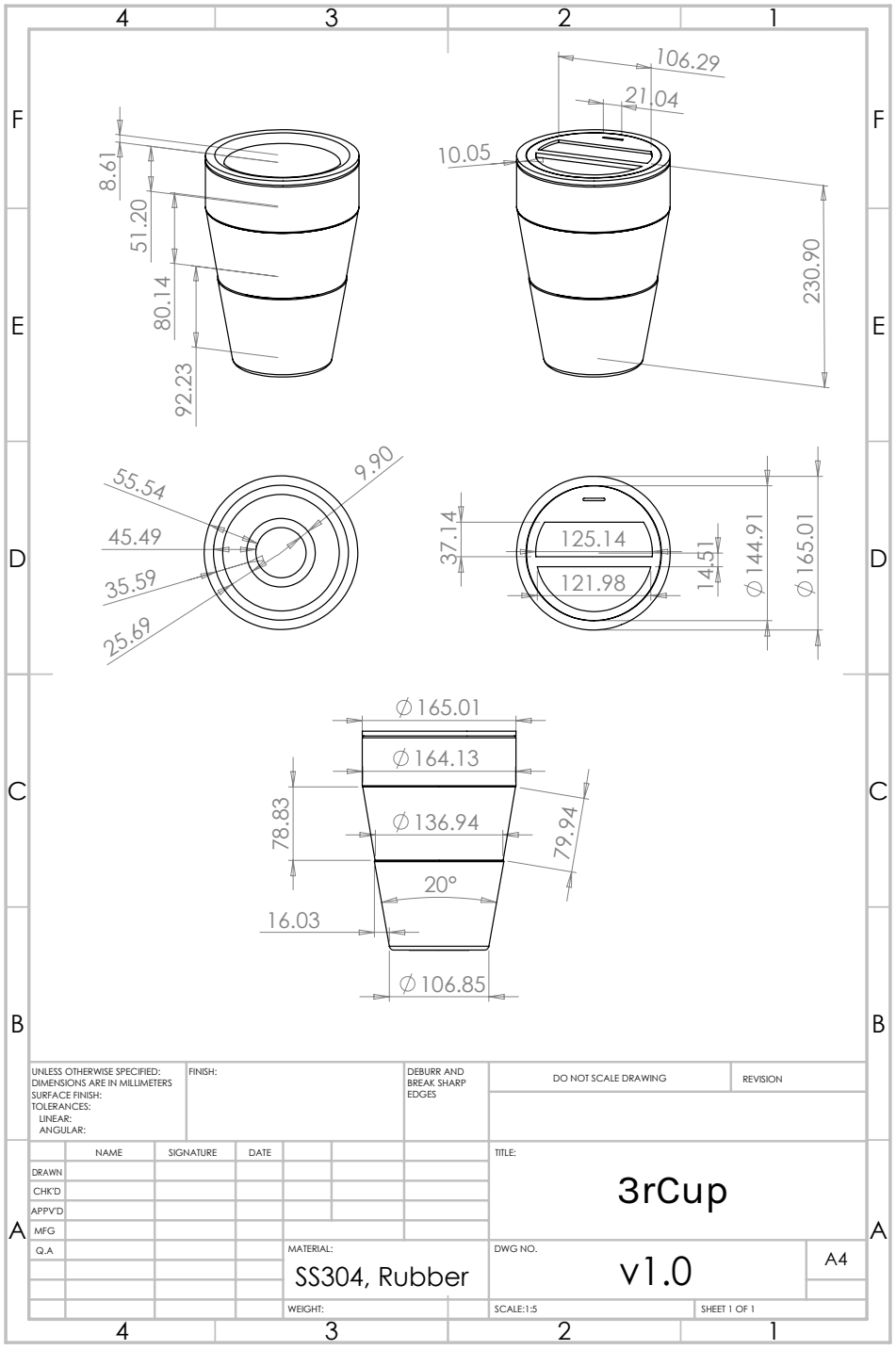
Alexander Osterwalder (2010), *Strategyzer*

Appendix

Appendix 1 – 2D technical drawing sheet



The Business Model Canvas

Designed for:	Designed by:	Date:	Version:
3rCup	Marianna Oleotti		

Key Partners

- Optimization and economy of scale. Especially in the production phase, since our brand only produces this product, it does not make sense to hold the whole manufacturing infrastructure
- Reduction of risk and uncertainty. Influencers and media to build a community.
- Resellers.

Key Activities

Production and platform/network: after producing this straightforward product (focusing on production and logistic), the next most important step is to try to conquer people's heart and convince them to use the product. So, focus on engagement and community building.
- Youtube sponsorship and unboxing
- Instagram influencers
- Identify shop to resell the product

Key Resources

- Physical: manufacturing facilities where to produce the product and warehouse (external)
- Intellectual: brands, copyrights, partnerships, and customer databases (internal)
- Human: designers and marketing agents (internal)

Value Propositions

The cup proposed in a reusable cup that does not only focuses on the recyclable product of plastic. The design is minimalistic and captivating, in color blocks, and maybe in the future, also customizable.
•NEWNESS → this cup is a unique model of a rubber recycled cup that is not present on the market nowadays.
•USABILITY/DESIGN → the design is linear and simple, minimalist
•PERFORMANCE → the cup can maintain beverages hot due to the high insulating material used, the product will come from a controlled supply chain that takes care of the raw materials involved in the life-cycle of the cup from the moment they are inserted in the business until their disposal.

Customer Relationships

Personal assistance, communities and co-creation. This type of relationship will help the customer make him/her feel involved in the process (like if the product was delivered from one person directly to another). The idea is to sell the product only a few times in a lifetime to a single person.

Channels

Owned and Direct

Web sales: open a website of the brand/company and sell directly to the customer.
Awareness: social media (ig and youtube), paid promotions, photo and video marketing
Evaluation: influencer marketing
After-sale: subscription to a newsletter, life-time repair support or discount on the second mug

Partner and Indirect

Partner store: selected store resells our product, ideally brands that envision the same values.
Awareness: social media (ig and youtube), paid promotions, photo and video marketing
Evaluation: influencer marketing
After-sale: physical discount on the next mug, lifetime support, reminder to the website, discount in the shop

Customer Segments

Demographic segmentation: The who

The people who are more likely to buy this product are smart people who have a high sense of responsibility towards sustainability, as this product is not a necessity good. Age and gender are not relevant, even if the product is expected to be sold to younger generation. These people would be either people who work in an office, students, or people that would take this cup on their way to go.

Psychographic segmentation: The why

The people who purchase this product are environmentalist or strongly care about the environment, and at the same time they are paying a detailed attention to the aesthetic of his/her surroundings. Ideally, these people follow a vegan or minimalistic lifestyle, with an interest in travel and excursions.

Geographic segmentation: The where

All over the world, but not in the tropical regions/hot countries

Behavioral segmentation: The how

Behavioural segmentation groups costumers according to their spending and purchasing habits, and loyalty to the brand. Ideally, the people who buy this product are spenders (choosing high quality investments over low quality cheap buys).

Cost Structure

This product is value-driven.
- Promoting on social media (influencers and promotions)
- Promoting on reselling
- Website
- Strong marketing campaign
- Costs of manufacturing

Revenue Streams

Asset sale (fixed menu pricing).

DESIGNED BY: Strategyzer AG
The makers of Business Model Generation and Strategyzer

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Appendix 3 – Supply Chain