



IBBU COFFEE MAKER

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Introduction

Context

According to the 2020 National Coffee Association (NCA) report, 64% of American adults currently consume coffee every day. 45% of coffee consumers brew their coffee by single cup brewing systems, while 13% of coffee drinkers use espresso or other machines. Seventy-nine percent of Americans prepare coffee at home, making it one of the most used appliances in everyday life.

Vanlife

Because of the Covid-19 pandemic, Many Americans realized they didnt need to be in an office to do their job. As long as they had a laptop and internet they were set. Due to that, the traveling/nomad lifestyle exploded in popularity. Many professionals hit the road in their vehicles or spent the shutdown building up adventure vans. This created a new market supplying vanlife gear to eager customers.

The Problem

How might we improve the coffee brewing experience for car/van campers?

RESEARCH & INSIGHTS



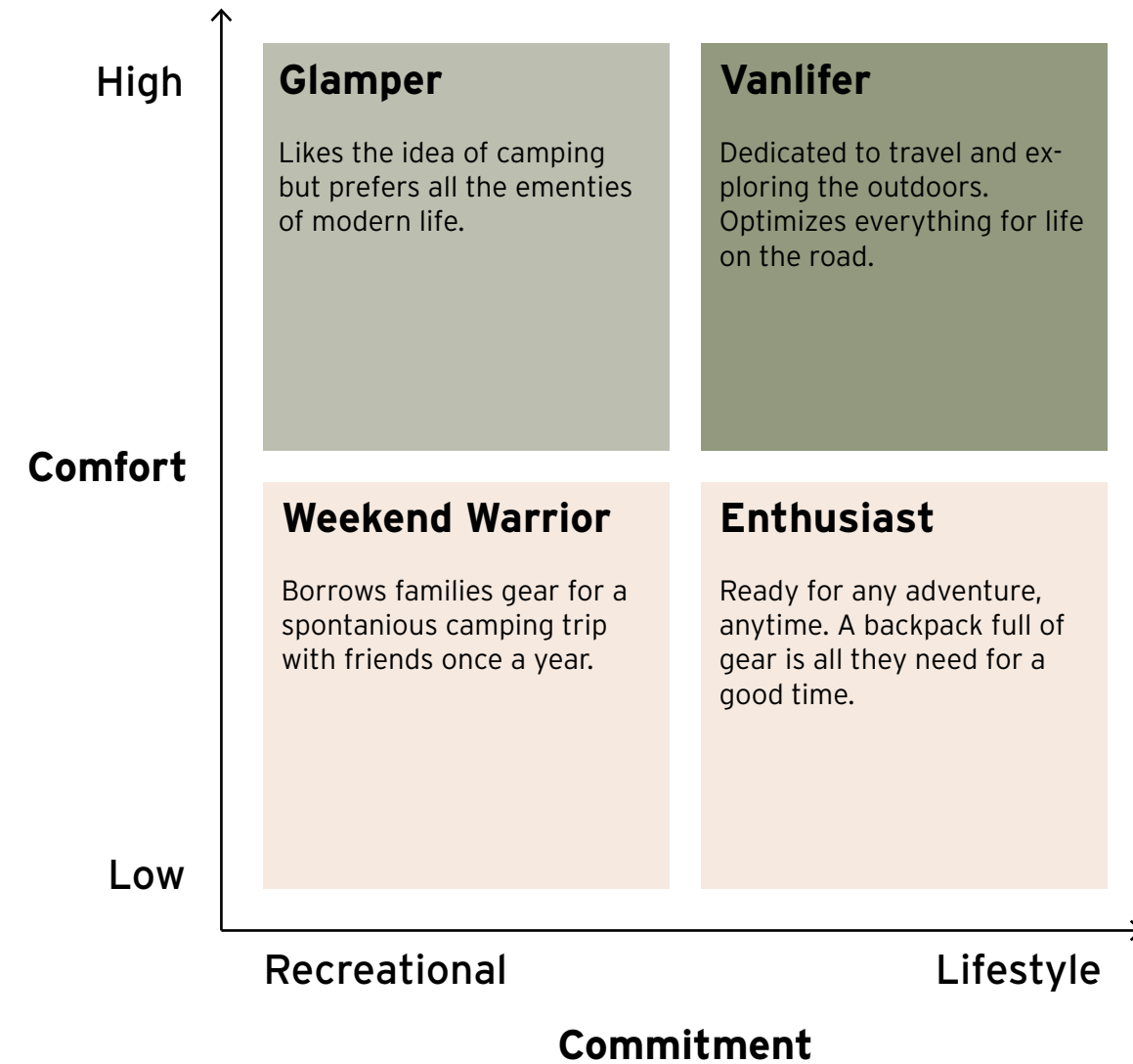
Users Types

Understanding The User

Comparing how commitment level of a camper, and comfort wanted while camping divide the camping market into sub-markets. The differences in these groups will dictate what kind of products will work best for each specific users.

The User

A vanlifer is an interesting sub group of camper because of their enthusiasm for the lifestyle and the means to surround themselves with the products that improve their lives.



Users Persona



Lifestyle

Thomas spent his early life traveling to every corner of the earth, climbing the worlds highest peaks, exploring incredible cities, and meeting some pretty cool people along the way. At 37, Thomas now has the time and money to build his dream van to explore the US in the comfort he always wished he could afford in his early days. He is very intentional about every little detail of his life. All his belongings and gear is tough out to fit in the little space his van can provide. During his travels, Thomas has seen how humans have impacted the earth with all the wasteful products we consume. He is very mindful of his own impact and is prepared to do what it takes to live a sustainable life.

Pain Points

- Doesn't want to have to build a fire or turn on his stove everytime he wants to boil water.
- Space is a premium and struggles to find room for even the basics.
- Refuses to use a keurig at home because of the impact plastic K-cups have on the earth
- Spends too much money buying coffee when on the road because its so much easier

Opportunities

- Thomas uses a generator and solar to power his vehicle and charge his gear
- Established vanlifers are willing to pay more for a high quality brand and product

Thomas

Age: 37

Job: High School Teacher

Location: Waconia, MN

Van: 2016 Ram Promaster

Lots of Gear, Little Space

What You Need

- Generator/Solar
- Fridge/Freezer
- Water Reservoir
- Food Storage
- Stove
- Cookware/Dinnerware
- Heater
- A/C
- Clothes
- Shoes
- Winter Gear
- Toiletries
- First aid
- Portable Shower
- Portable Toilet
- Internet
- Flashlight
- Cleaning Supplies
- Folding Table/Chairs
- Repair Kits
- Jumper Cables
- Shovel
- Fire Extinguisher
- 12v Drill
- 12v Air Compressor
- Laptop
- Books/Games
- Adventure Gear
- Coffee Maker
- Pictures/Posters
- Decorations
- + Much More

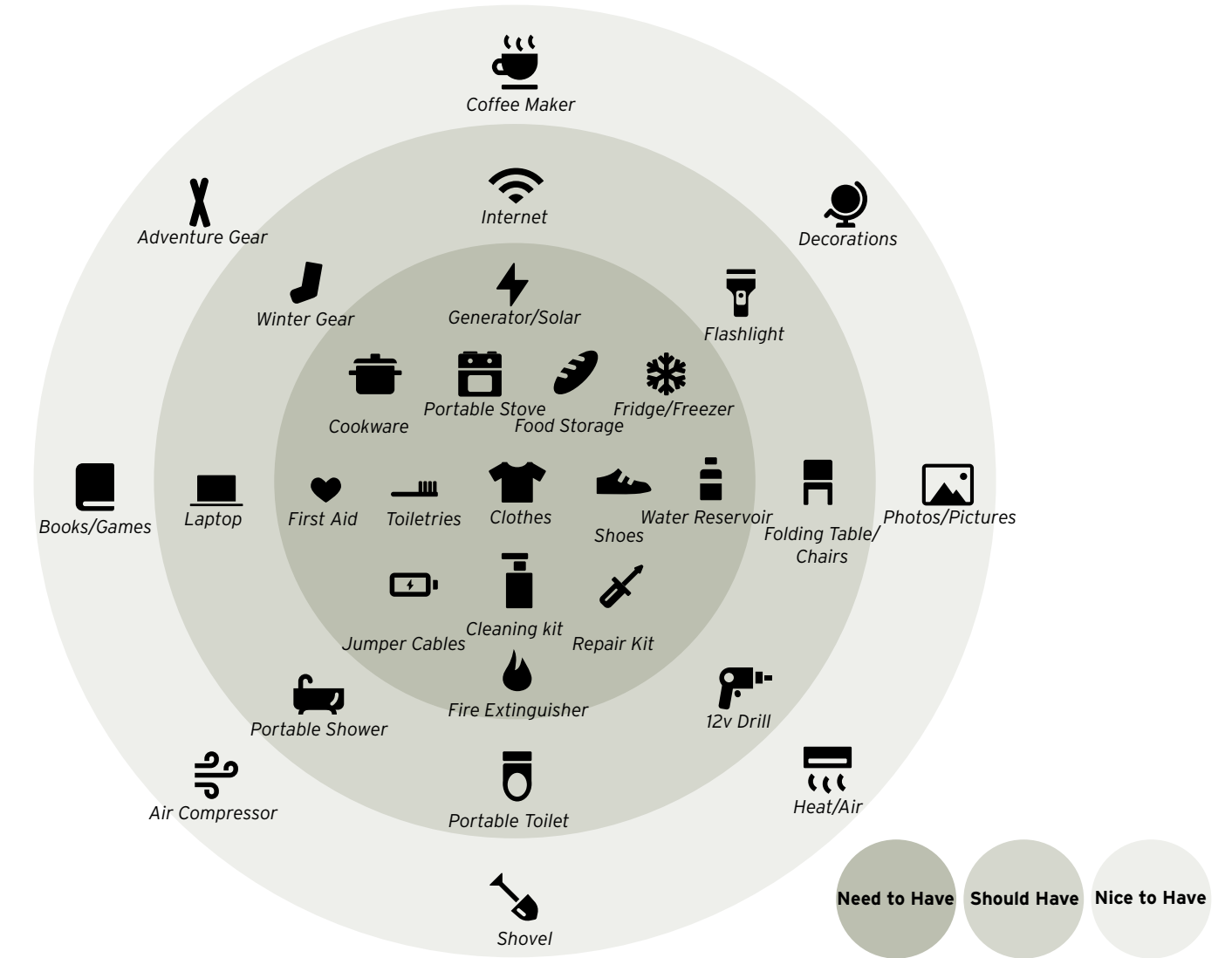


Needs Hierarchy

Some Things are More Important

This diagram demonstrates the level of necessity for different products used for van camping. The center circle is filled with items that are a must. the second is for products that you should probably have with you but you could make it work without. The outer circle is for the products that bring extra comfort but aren't things that are deemed important to most users.

Coffee makers are in that last ring, but that doesn't mean it's not valuable. Comforts like coffee on-the-go can be the difference in someone enjoying the trip or dreading it. Therefore, it's important to be able to bring those comfort products to consumers who don't want to compromise.



Product Benchmarking

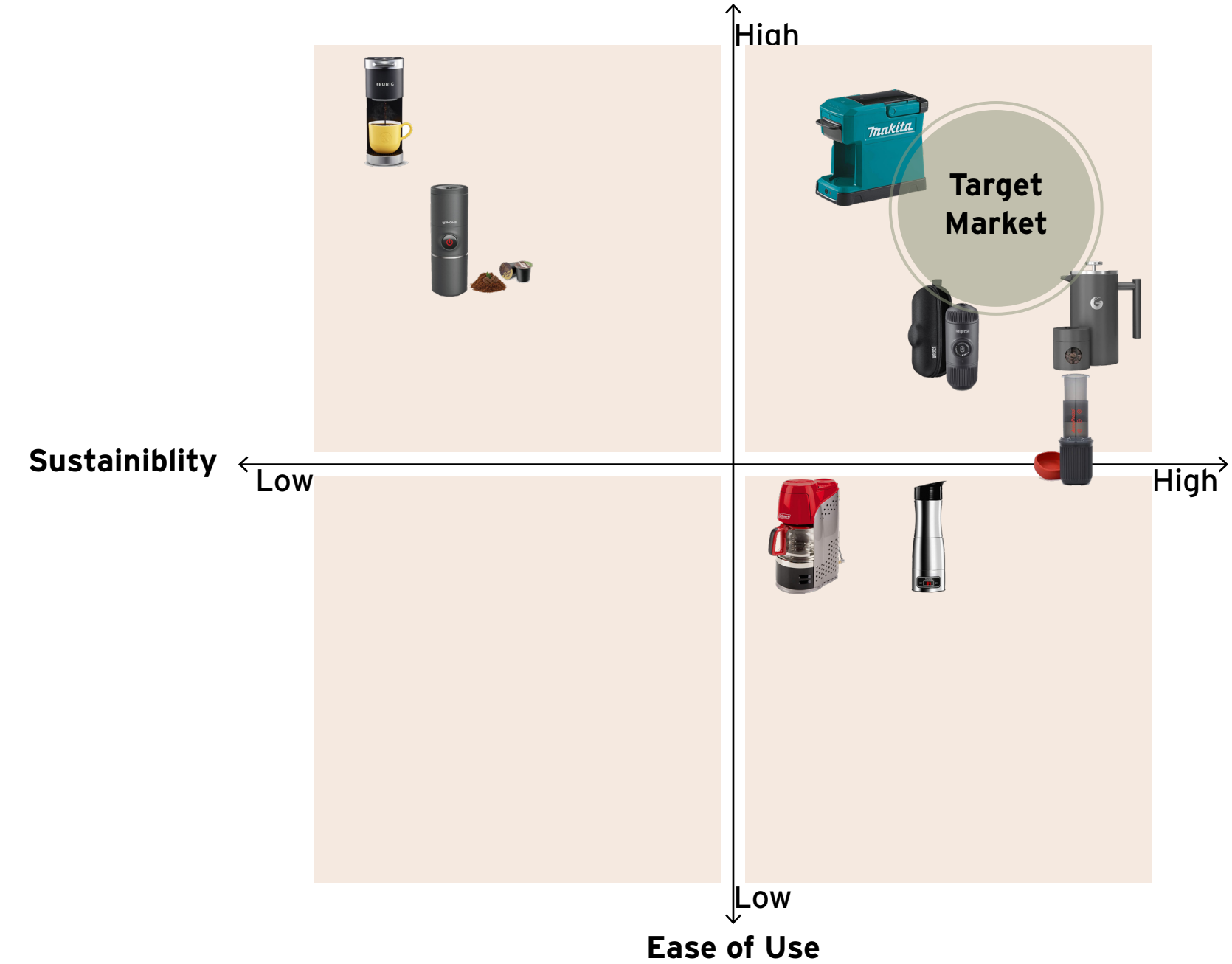
Understanding the Market

In the Benchmarking table, 8 unique products were compared over 9 specific criteria in order to show differences and similarities in the market. These products reflect wide ranges of users, tech, and design.

The same 8 products were then placed on a biaxial map to show where there are opportunities for new products.

Product	Aeropress Coffee Maker	NanoPresso	Viesimple	Imons Portable Coffee Maker	DCM501Z	QuikPot	Coffee Gator French Press	K-Mini Plus
Image								
Brand	Aeropress	Wacaco	Amperware	Imons	Makita	Coleman	Coffee Gator	Keurig
Price	\$29.99	\$80	\$99.69	\$45	\$101.99	\$129.99	\$27.99	\$99.99
Size/Shape	9x4x4 Cylinder	7x3x3 Cylinder	10x3x3 Cylinder	9x4x4 Cylinder	11x10x8 Rectangular	17x13x9 Cylindrical	8.5x4x4 Cylinder	12x4.5x11 Rectangular
Ease of Use	3/5	3/5	2.5/5	4/5	4.5/5	2.5/5	3.5/5	5/5
Portibility	4.5/5	4.5/5	4.5/5	4.5/5	3/5	2/5	3/5	1/5
Sustainability	4.5/5	4/5	3.5/5	2/5	3.5/5	3/5	5/5	1/5
Heating Element	Heating not included	Heating not included	12v Rechargeable Battery	Heating not included	12v Rechargeable Battery System	Propane	Heating not included	Wall Outlet
Heating Type	Aeropress Coffee/Espresso	Aeropress Coffee/Espresso & single use pod	Moka Pot style Espresso	Single use pod or reusable pods	Coffee grounds or single use pods	Drip Coffee	French Press	Single use pods
Quality	3/5	4/5	3.5/5	3/5	4.5/5	4/5	4/5	4/5
Aesthetic	Functional	Modern	Classic	Minimal	Rugged	Rugged	Minimal	Minimal

Product Map

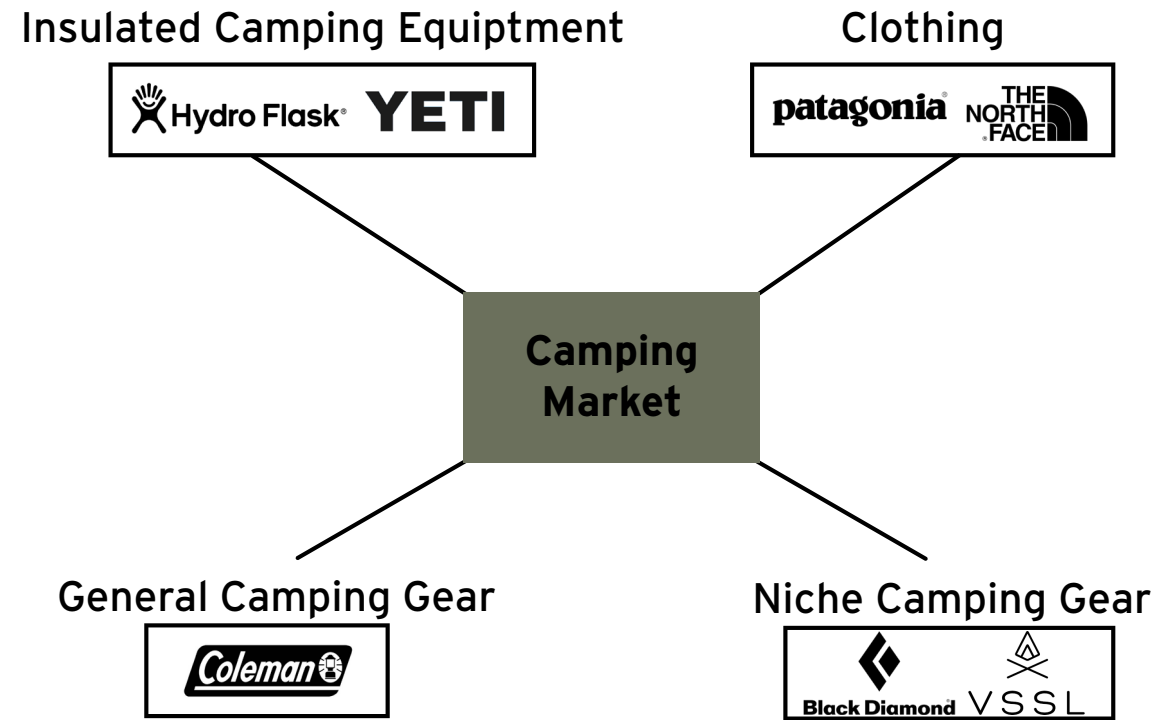


Outdoor Brand Benchmarking

Why These Brands?

The brands in this comparison are there to show some of the different market segments out there. They are not necessarily coffee brands although some are starting to enter that market (see Coleman and VSSL).

The idea is to get a better understanding of the user by looking at the brands they choose to buy from. By looking at the things these companies do, we can see where they excel and where they fall short. This leads to discovering where to position a new coffee maker brand for outdoor enthusiasts.



S.W.O.T. Analysis

This table dives deeper into the companies to get an accurate idea of how the company positions itself and how it compares to its competitors.

It takes a look at each companies strengths, weaknesses, opportunities, and threats. Breaking it down this way makes it easier to understand where the open spaces are in a market that seems extremely saturated.

Brand	Black Diamond	Hydro Flask	North Face	Patagonia	VSSL	Coleman	Yeti
Image							
Strengths	High quality gear for specific activities	High brand loyalty and good products tech	Wide range of high quality products	High brand loyalty and Quality clothing	Novel solutions to storage of camping equipment	Robust quality camping products	Cooling technology and quality products
Weaknesses	niche product range	Relatively small product range	Loss of market share in niche markets	Business model easily replicated	New brand with small product range	Lacks gear for extreme camping conditions	Lack product differentiation to competition
Opportunities	Exploring products in new niche markets	Expanding Product line	Use capital to buy niche product companies	Capture customers with sustainability concerns	Apply tech to new markets	Introduce "pro" line of existing products	Leverage brand into new product markets
Threats	Larger companies intering niche markets	Oversaturated water bottle market	Niche product makets taking market shares	Sustainable clothing brands	Large Companies developing similar tech	High Quality niche camping products	Cheaper alternatives taking market shares
Aesthetic	Form follows function	clean and simple	Fasionable outdoors	Natural and earthly	Minimal and fuctional	Essential and simple	Rugged and clean
Colors							

The Problem With Single Use Pod Coffee

A Novel Solution with a Devastating Impact

Single use plastic coffee pods were introduced to the world in the late 80's. Popularized by Nespresso and Keurig, The pod industry is one of the largest coffee segments today. Relatively cheap and incredibly easy to use system makes this type of coffee stand out. A seemingly perfect product with but with a fatal flaw in the form of single use plastics.

In 2018 alone, 56 billion capsules went to landfill, with fewer than 5% of all capsules being recycled. There is a clear need for a more sustainable alternative in the market. Companies like Keurig have no interest in developing new practices when they continue to grow with their current pod offerings. They care about the bottom dollar and disregard our planet.

“I feel bad sometimes that I ever did it,”

-John Sylvan
Founder of Keurig and inventor of the K-Cup.

How Pod Coffee Works

Case Study:

KEURIG

In order to develop a more sustainable pod, we must first understand how a pod style coffee maker functions.

Water Reservoir
Water is poured in for making the coffee

Water Pump
Water is pumped into the coffee machine to be made into coffee

Heating System
Water flows through heated tubes that bring the water up to the ideal temperature

Pressure Pump
Pressurizes the the water to be sent into the pod

Injector
Pierces the pod releasing the water into the grounds and brewing the coffee

Pod
Brewed coffee runs through the filter at the bottom of the pod and into a cup

Insights

Users

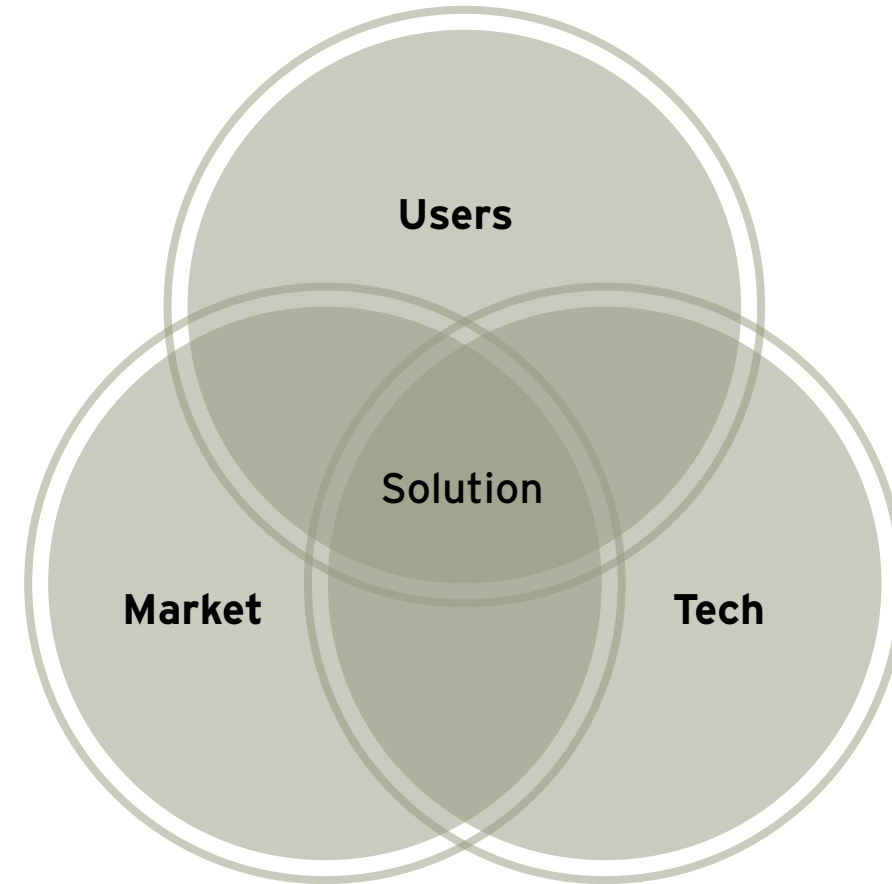
- Vanlife is an interesting sub group of camper because of their enthusiasm and dedication.
- Users have very little space to fit all their belongings.
- Outdoor enthusiast are willing to pay more for a sustainable product that reduced their impact.

Market

- Opportunity in the market for sustainable and easy to use coffee makers.
- Creating a brand with a unique story to tell will create strong brand loyalty with customer base.
- No brands are dominating the market. A lot of competition but no clear industry leaders.

Technology

- Putting a sustainable spin on the pod style market could be a huge feature to leverage.
- Composting coffee grounds (high in nitrogen) is great for plant growth.



Product Opportunity Statements

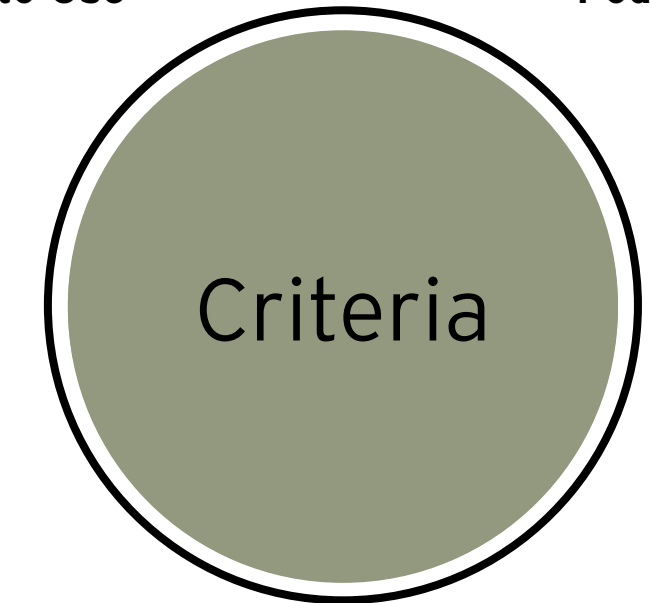
HOW MIGHT WE Create a coffee maker that is easy to use and fits well with the van living lifestyle?

HOW MIGHT WE create a more sustainable pod style coffee maker for on-the-go living?

HOW MIGHT WE Create a portable, easy to use coffee maker for adventurous and passionate individuals looking to live sustainably?

Easy to Use

Pod Coffee



Sustainable

Portable

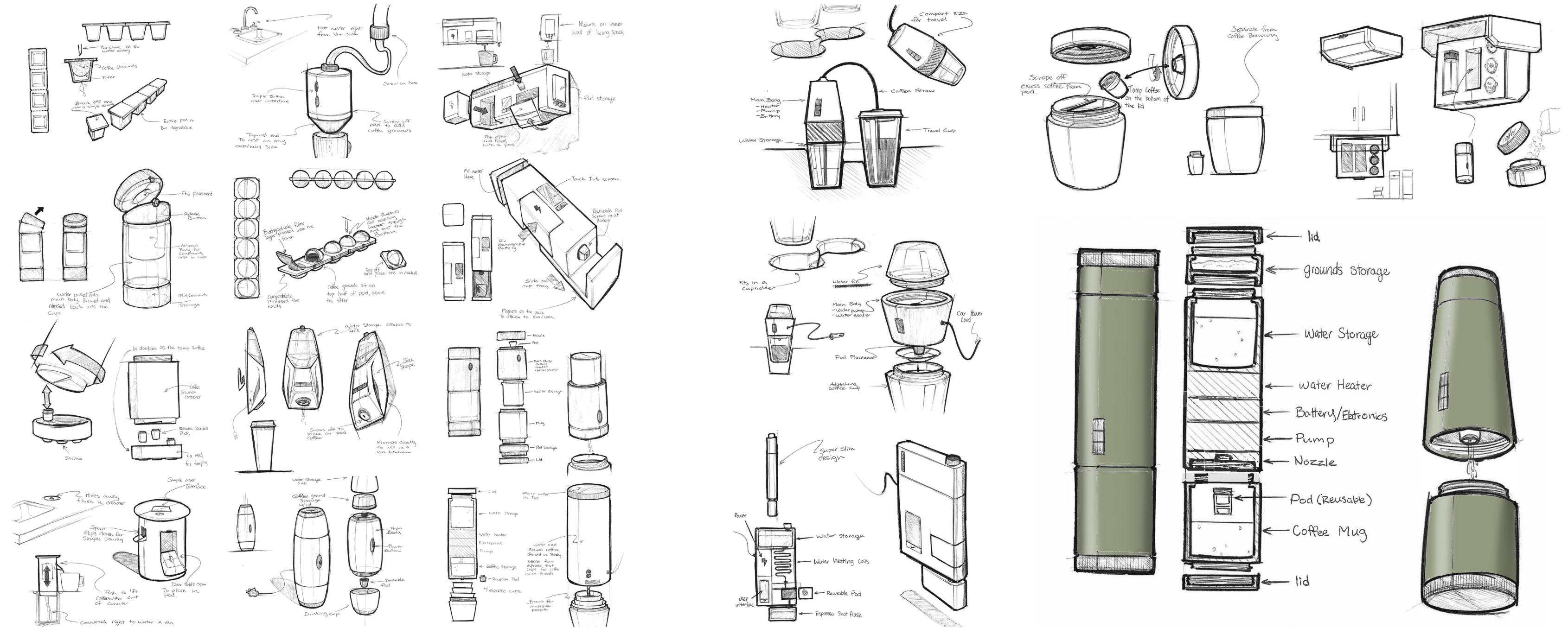
CONCEPT DEVELOPMENT

Ideation

Pen to Paper

A first round of ideation sketching created a wide range of ideas spanning form and functionality. Emphasis was made on portability, easy to use processes, and zero waste pod design.

A finding I came across while sketching was that a great place to design for was a cupholder. It is a feature all vehicles have included. I also found the value in a pod that is reusable with some sort of storage for your favorite coffee grounds.



Product-Service System Pitch

Product Name:

Ibbu Travel Coffee Maker

Problem:

HOW MIGHT WE Create a portable and easy to use pod style coffee maker for adventurous campers looking to live more sustainably?

Product Pitch:

The Ibbu travel coffee maker is a fresh new take for coffee on the go. It takes the ease of a pod style coffee maker and fits into a frame perfect for adventurous individuals living a nomadic lifestyle. This three part system includes the main body that brews your coffee using a reusable pod, a storage compartment to refill that pod, and an insulated cup for your freshly brewed coffee. Ibbu is an all-in-one solution that brews coffee from start to finish in the most convenient and sustainable manner. Its simple shape makes it perfect for travel and will fit into any standard size cupholder in your vehicle. A robust process coupled with high quality design and materials creates an easy coffee making experience anywhere.

Features and Functions:

- All-in-one brewing station
- Small footprint
- Integrated insulated coffee cup
- Coffee grounds storage
- Reusable Pod

Competitors:

- Keurig
- MiniPresso
- Aeropress
- Coleman
- Hydroflask

Target Users:

- Van campers
- Overlanders
- Car campers
- Small space living

Stakeholders:

Manufacturer, distributors, retailers, consumers.

Rationale for Development:

Provide an easier brew process while reducing plastic waste.

Primary Product Function:

Easy to use single cup brewing.

Secondary Product Function:

Tea brewing or hot water for cooking essentials.

Key Technologies:

- 12v Brewing power within a compact shell
- Simple and easy to use interface






Approximate Price:

\$100-\$150

Specification Benchmarking

The Parts That Matter

The purpose of this benchmarking table is to show the key components that are need for the concept I am exploring. Exploring these five parts of my design proves that it is functionally feasible.

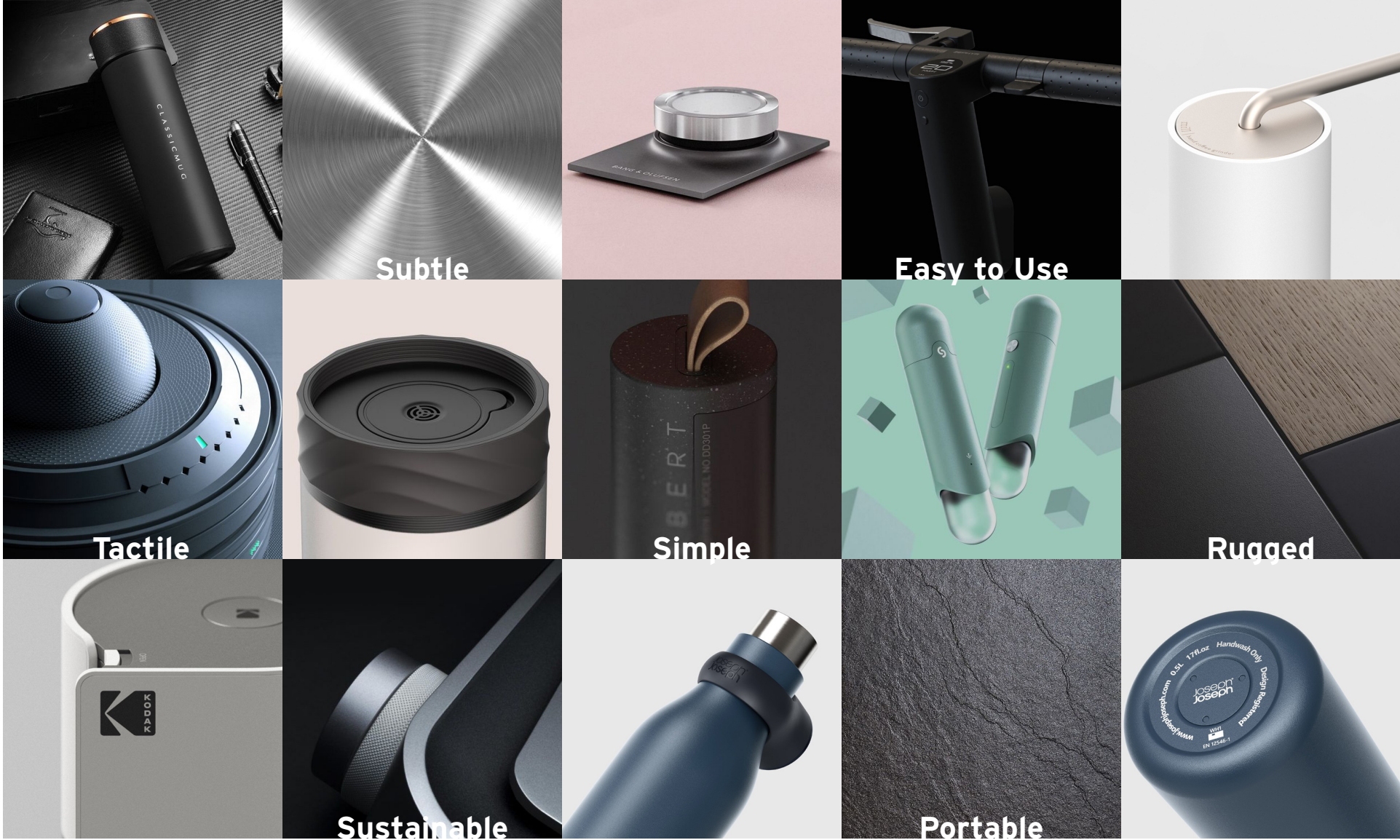
Product	Dernord 12v Water Heater	TalentCell 12v Rechargeable Battery	12v Water Pump	EZBASICS Reusable K Cups	Yeti 10 oz Insulated Mug
Image					
Size	0.3 x 0.3 x 6.5 inches	0.9 x 2.5 x 4.1 inches	2.1 x 1.9 x 1.6 inches	2 x 2 x 2.25 inches	4.5 x 4.5 x 4.5 inches
Materials	Stainless steel	Lithium ion battery	Plastic components	BPA-free plastic with metal mesh filter	Vacuum insulated stainless steel
Retail Price	\$23	\$27	\$16	\$10	\$25
Compatibility	12v	12v	12v	Fits most Keurig Coffee makers	Not compatible in standard cupholders
Weight	8 ounces	6.7 ounces	3.5 ounces	2.4 ounces	12.6 ounces
Notes	Need shorter length heating element	Volume works but dimensions must be re-configured	Original purpose is to pump water in fish tanks	Needs threads at top for attachment to machine	Added value with integrated insulated cup

Design Language Development

Purposeful Design

Here we can explore what the product semantics are going to be defined by. These six categories provide a road-map to guide and make sure the final product is a visual reflection of all the research and exploration done early on. This is essentially the concept's DNA.

Design Element	Description
Form	Minimal - Simple surfaces and shapes with cylindrical body. Sleek - Clean transitions and high quality surfaces.
Details	Subtle - High quality but not in your face. Functional - Beautiful interface that is simple and easy to use.
Materials	Rugged - High quality stainless steel. Tactile - Powdercoated finishes for durability. Sustainable - Recycled Plastics.
Colors	 #4D4F40 #92997E #6B7B8C #F5E9E0 #C3926F #000000 #FFFFFF
Texture	Grip - Small bump patterns keep simplicity while performing. Touch - Smooth surfaces create quality feel.
Personality	Understated - Doesn't look like much until you get your hands on it. Quality - Gives you the feeling that nothing else can compare.

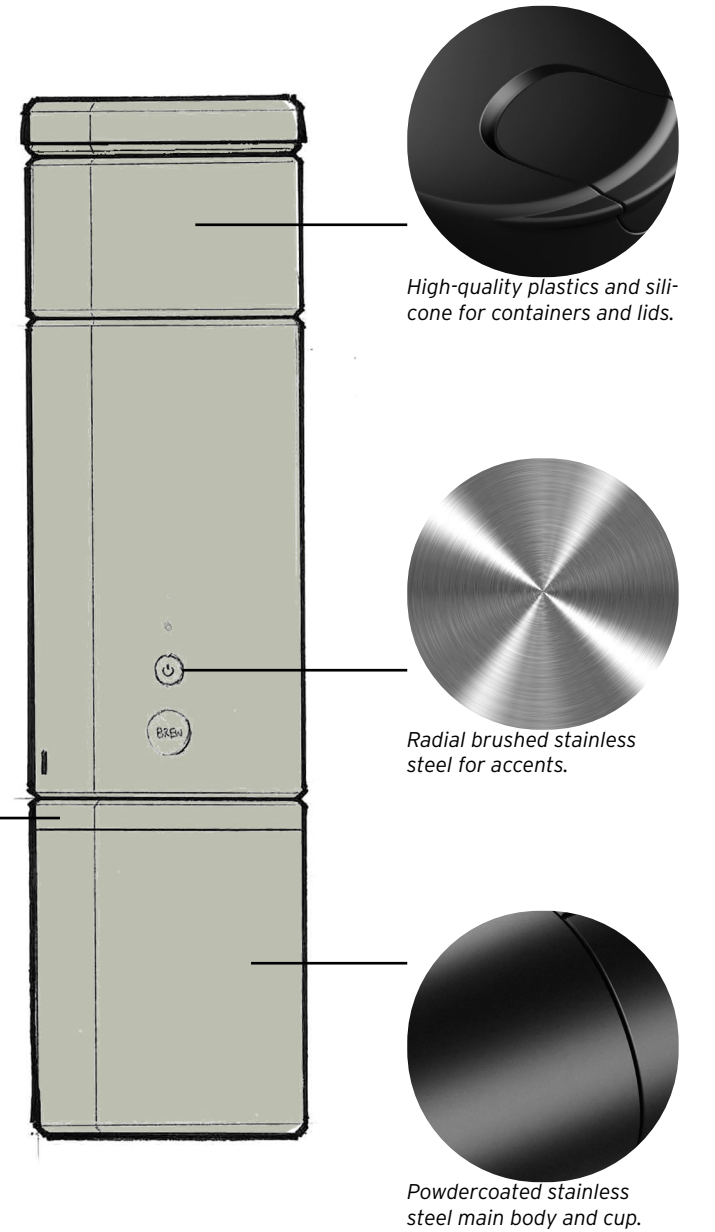
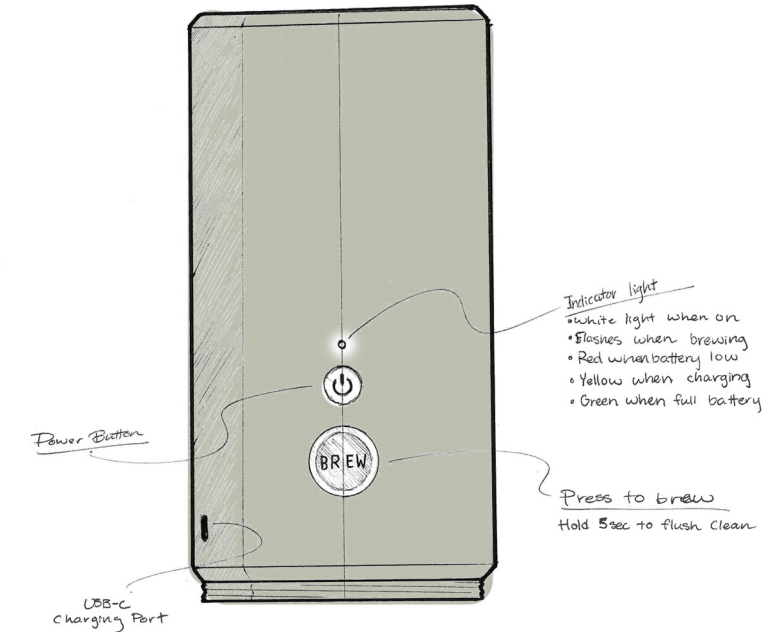
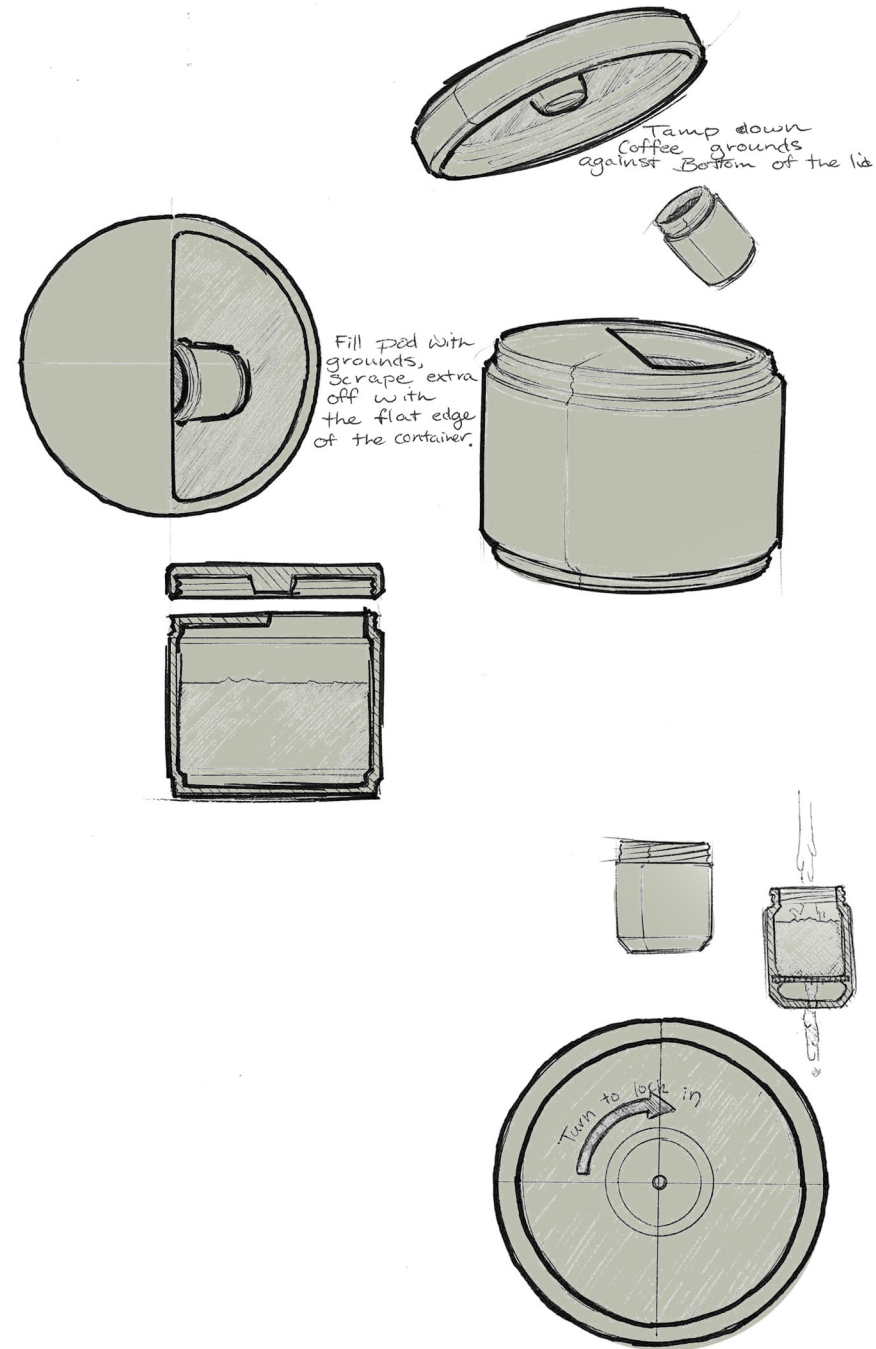
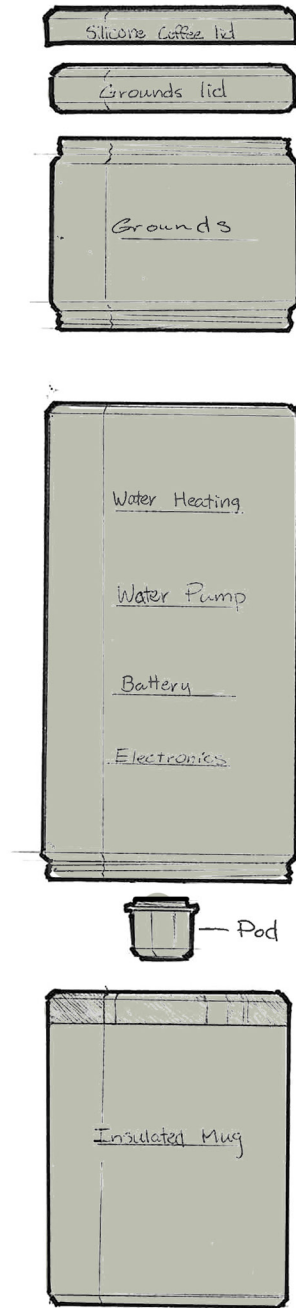


IBBU TRAVEL COFFEE MAKER

Refinement

Defining Details

This second round of sketches is meant to show more detail into how the product with function as well as the final semantics. Here we dive into mechanisms and specific features. Along with that is a rough guide for some of the materials that will be used.



ibbu
made to explore.



Designed for Comfort On-The-Go

The Ibbu travel coffee maker fits great into a nomad lifestyle where space is limited and quality is essential. Its small footprint fits into cupholders or stored away in small compartment within a vehicle. Its simple timeless design language is sure to fit into any users style.

The intuitive use process leads to easy, repetitive brewing. Couple that with a simple cleaning cycle, there is a cohesive system that is great for sustainable coffee drinking. The premium materials and components used provide a robust product that will withstand the test of time.



Features

The Ibbu travel coffee maker combines all the essential parts needed to make a delicious cup of coffee in a small integrated system. The main body takes care of heating the water and pumping it through the reusable pod. The pod is designed to eliminate single use plastics in coffee processes. Easy refilling is made possible with the integrated coffee grounds storage placed at the top of the system. The Ibbu coffee maker has a insulated coffee mug built right into the profile which unscrews to take it wherever you want once your coffee has been brewed.



Color, Material, Finish

Only the highest quality materials and finishes are used in the Ibbu system. The stainless steel components are sure to withstand the abuse of a nomadic lifestyle. Recycled polypropylene parts are durable and eco-friendly for peace of mind. Textured button interface provides great tactile experience.

1. Buttons

Color: Black
Material: TPU
Finish: Textured wave pattern

2. Coffee Lid

Color: Black
Material: Silicone
Finish: Smooth

3. Insulated Coffee Mug

Color: Black
Material: Stainless steel
Finish: Rough (Metal), Textured Powdercoat

4. Container

Color: Black
Material: Recycled Polypropylene
Finish: Textured Powdercoat

5. Pod

Color: Black
Material: Recycled Polypropylene
Finish: textured

6. Main Body

Color: Black
Material: Stainless steel
Finish: Rough (Metal), Textured Powdercoat

7. Container Lid

Color: Black
Material: Recycled Polypropylene
Finish: Textured Powdercoat



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User Storyboard



Pod Refill

Step 1: Unscrew the lid of the grounds container.

Step 2: Scoop grounds into the pod.

Step 3: Scrape excess grounds using the container lip.

Step 4: Tamp the coffee grounds using the underside of the lid.

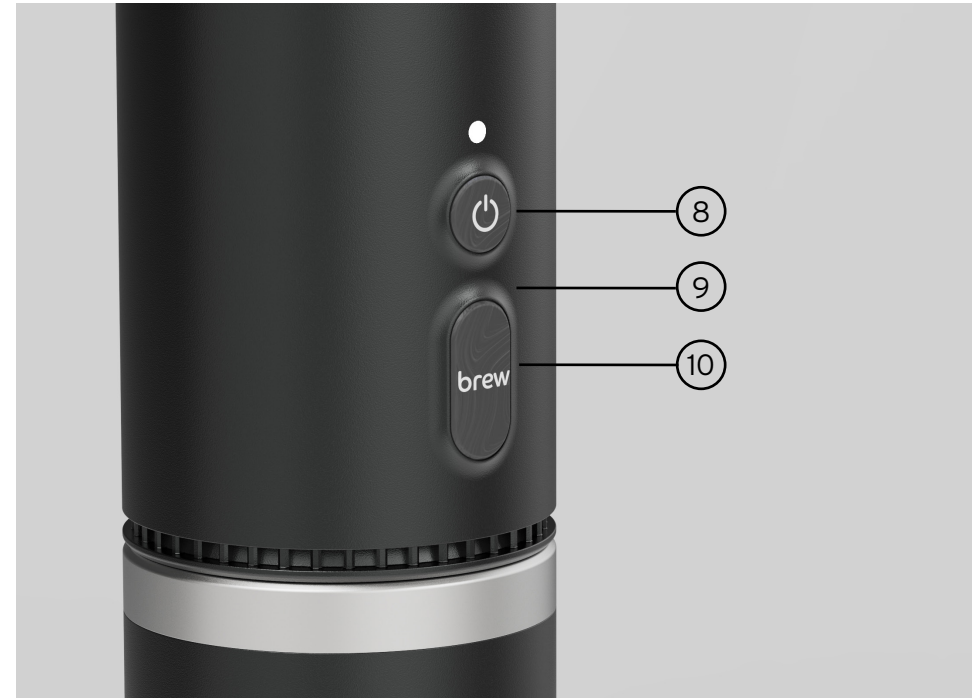


Pod Placement

Step 5: Unscrew the insulated mug.

Step 6: Screw in the filled pod into the main body.

Step 7: Screw the mug back into the body.



User Interface

Step 8: Power coffee maker on.

Step 9: Fill main body with 8oz of water.

Step 10: Press Brew.



Post Brew

Step 11: Unscrew mug from the body.

Step 12: Remove silicone lid from the top of the coffee maker and place it on the coffee mug.

Step 13: Enjoy your coffee!

Cleaning

Step 1: Fill reservoir with water and descaling solution.

Step 3: Dispose of used cleaning water.

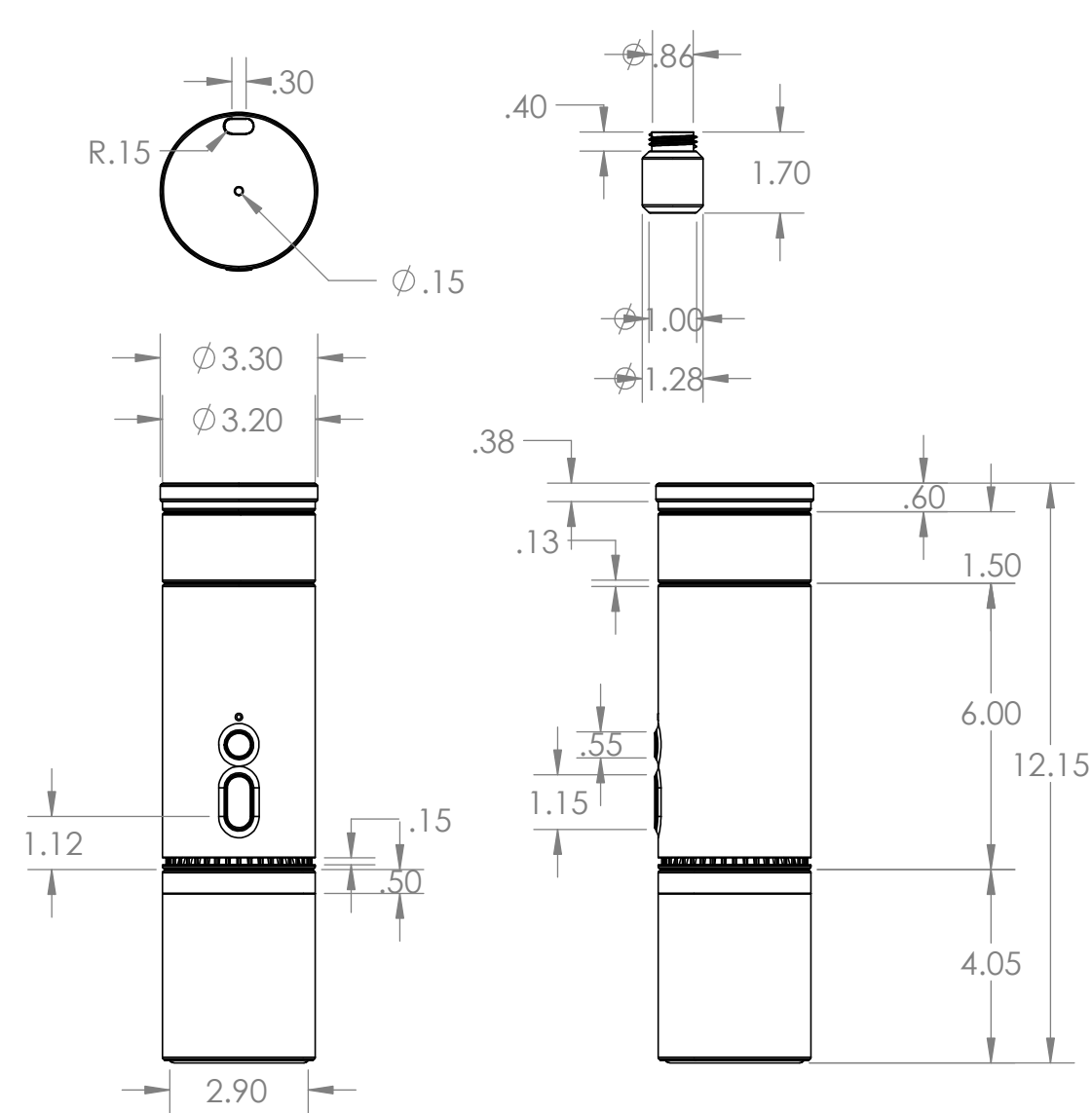
Step 2: Hold brew for 5 seconds.

Step 4: Wash out reusable pod.

ColorWays

In addition to the standard black colored coffe maker, there are five other colorways. with these color options, you are sure to find an lbbu for any personality or enviroment.

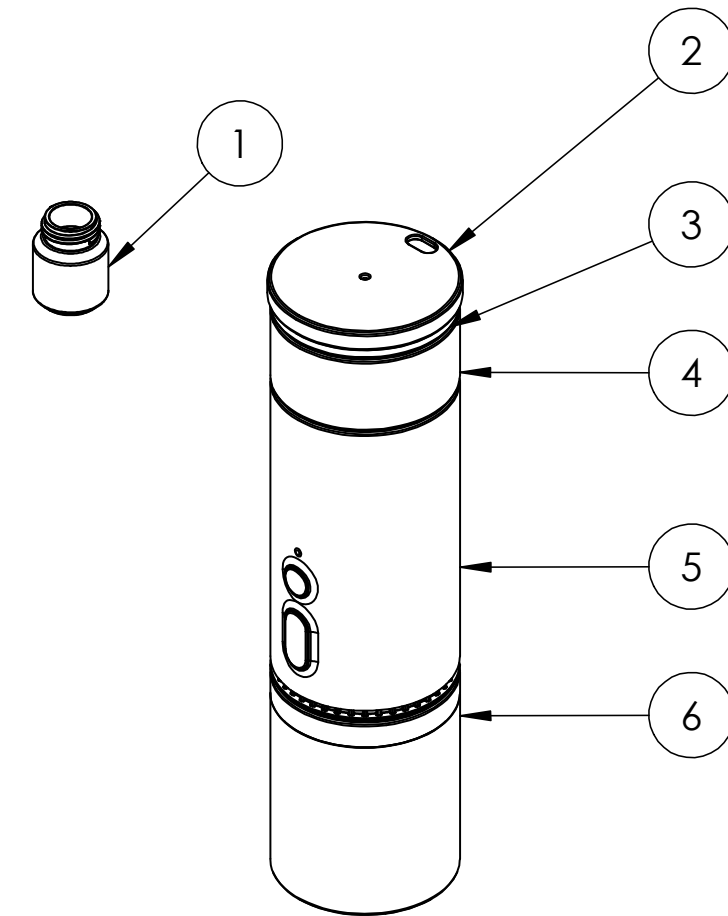




TITLE: IBBU Coffee Maker

SIZE **A** DWG. NO. IBBU-assem REV

SCALE: 1:4 SHEET 1 OF 1



Part Number	Part Name	Material	Finish
1	Reusable Pod	Recycled Polypropylene	Textured
2	Coffee Mug Lid	Silicone	Smooth
3	Container Lid	Recycled Polypropylene	Textured Powdercoat
4	Grounds Container	Recycled Polypropylene	Textured Powdercoat
5	Main Body	Stainless Steel	Textured Powdercoat
6	Insulated mug	Stainless Steel	Textured Powdercoat

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