

# Naplow

*Sprint 5 - May 8, 2025*



*a part of the Bearaby portfolio*

*Bearaby Team A:  
Alex, Iago, Natalie,  
Sabal, Stanley, Thaya, Vic*

With Bearaby looking to expand their product line, we saw an opportunity to design for the wind-down period - an adjacent space to sleep that supports rest - and reflect Bearaby's design language

*Existing Bearaby products (non-exhaustive)*



*Weighted blanket*



*Weighted eye mask*



*Knot pillow*

## Mission Statement

Our mission is to craft a **sustainable, beautifully** designed product that **supports your nightly wind-down** — helping you de-stress, relax, and ease into restful sleep.

Rooted in **natural materials** and thoughtful design, we're committed to **enhancing your well-being while caring for the planet** — creating calm, naturally.

The **wind-down period before bed is critical** for signaling to your body and mind that it's time to **transition from the day's activities into a state of rest**



Target Customer



Jennifer



**Age:** 53

**Status:** Married

**Children:** Twins (17 years old)



**Work:** Nurse

**Income:** \$155k

**Location:** Boston, MA

**Wants:**

- Natural sleep
- High quality products
- Sustainable products
- Share products with these attributes with family and friends

Calm

Anxious

Introvert

Extrovert

Cautious

Curious

Agreeable

Challenging

## Basic & Differentiating Needs

Easy Maintenance & Washability



Versatile Form & Usage with Retentive Form



## Bearaby Design Language

Sustainable Material & Durability



Weighted yet Repositionable



## Our customer feedback emphasizes appreciation for the Naplow's comfort, customization, and design



**Liyan (65)**

Business owner | Married | Two children | Two dogs

*"The color is beautiful, and the weighted element is comforting"*



**Corrie (47)**

Business owner | Married | No children | Three dogs

*"I like how [the pillow] is customizable so i can support multiple areas [body] at once"*



**Tess (37)**

CS Professor | Married | Two children | Two dogs

*"It reminds me of design-forward wellness resorts."*

*"Toggles are emotional, but duvet buttons are sleeker."*

*"I'd use the weighted version for meditation, light one for gifting."*



**Monica (56)**

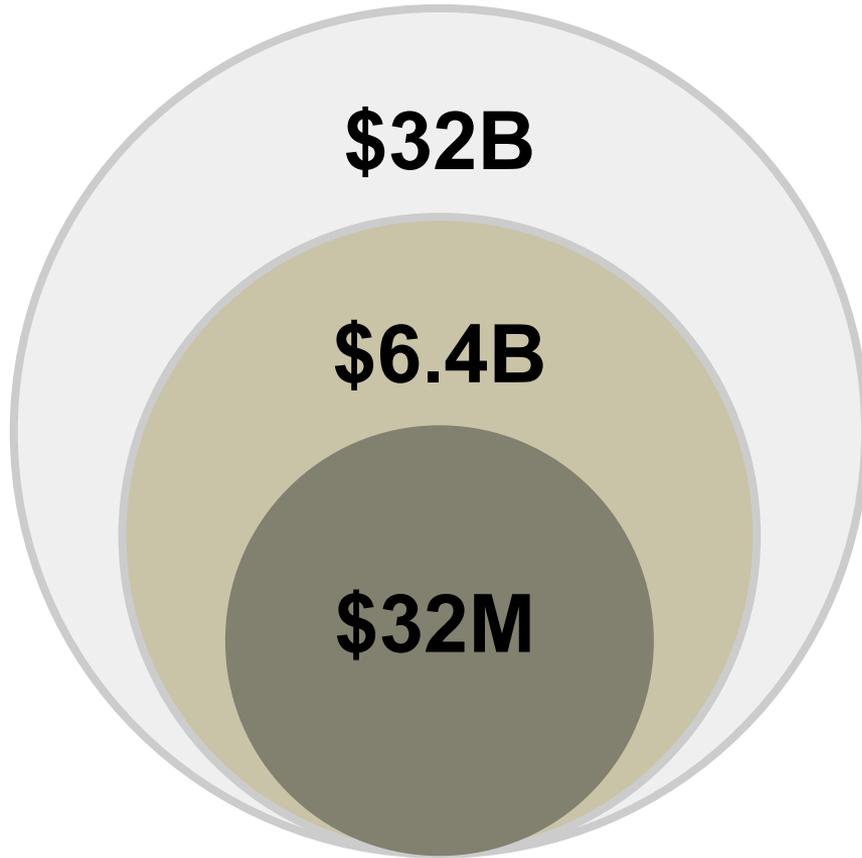
Gallery Curator | Married | No children | One cat

*"Love the idea of choosing fill types for different people."*

*"Snaps are visually cleaner; toggles feel more nostalgic."*

*"It's more than a pillow—almost like soft architecture."*

Market Opportunity



**TAM**

U.S. sleep-aid & relaxation market

**SAM**

Eco-friendly & wellness-oriented  
products in sleep accessories category

**SOM**

5-year projection

# Naplow will be sold directly to consumers through Bearaby's website through a controlled roll-out, targeting the existing user base

## Value Proposition



Naplow offers **customizable comfort through adjustable modules**, addressing different wind-down preferences, while reinforcing Bearaby's sustainability commitments through **premium eco-friendly materials**



## Revenue Streams

*Direct-to-Consumer purchasing through Bearaby's website.*

*Initially **sold exclusively online** to maintain control over branding customer experience, and margins.*

*Future distribution to include selective **premium wellness-focused retailers***



## Pricing

**\$169 per unit**, aligning closely with Bearaby's premium positioning

Pricing reflects costs, perceived value from eco-friendly materials, and the unique modular functionality



## Cost Structure

**Materials:** TENCEL fabric, organic latex foam, and Terraclay

Outsourced manufacturing, warehousing, and shipping.

Additional expenses include marketing, customer support and SG&A

## Go-To-Market

**Launch:** controlled rollout, leveraging Bearaby's existing customer base and social media community for initial market traction

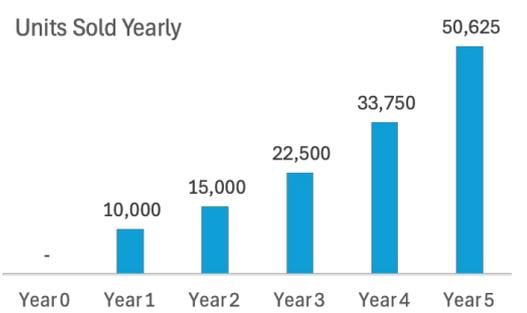
**Post-launch:** customer acquisition through targeted digital marketing and expansions into complementary channels



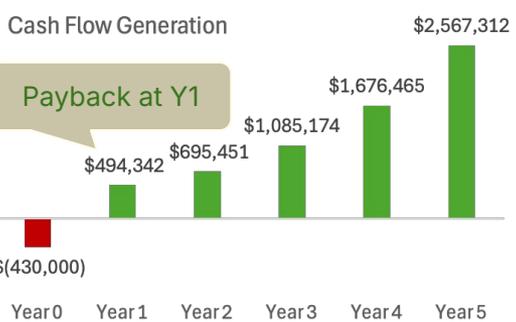
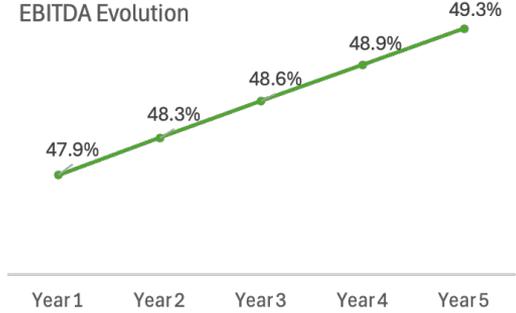
**Financial Model**

# Naplow's business case provides an attractive financial forecast with a quick profitability window and sustainable growth

## Sales and Revenue



## Profitability



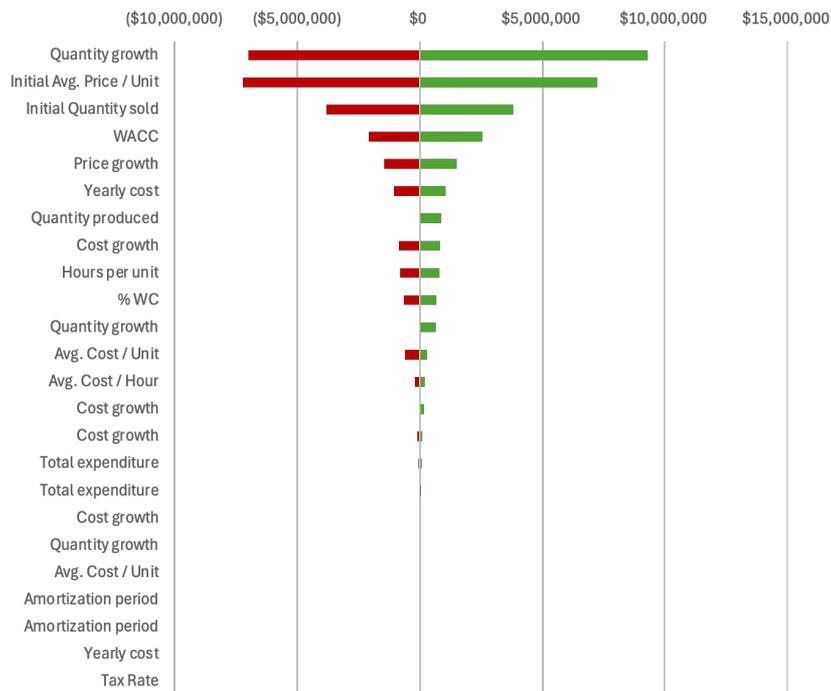
## Valuation

<b>NPV Y0-Y5</b>	\$ 3,860,377
<b>TV at Y5</b>	\$ 14,858,970
<b>NPV w/ TV</b>	\$ 18,719,348
<b>IRR Y0-Y5</b>	155%
<b>MIRR Y0-Y5</b>	77%

## Sensitivity Analysis

# Stressing the financial model under a Winter scenario still allows Naplow to yield attractive economics, breaking even at year 3

### NPV impact by lever vis-a-vis Base Case



### Case comparison summary

Winter	Base	Summer
<b>Revenue Y5</b>	<b>Revenue Y5</b>	<b>Revenue Y5</b>
\$ 3,175,983	\$ 8,903,018	\$ 21,588,909
<b>EBITDA Margin Y5</b>	<b>EBITDA Margin Y5</b>	<b>EBITDA Margin Y5</b>
33.4%	49.3%	63.0%
<b>NPV Y5</b>	<b>NPV Y5</b>	<b>NPV Y5</b>
\$ 610,947	\$ 3,860,377	\$ 12,242,816
<b>TV Y5</b>	<b>TV Y5</b>	<b>TV Y5</b>
\$ 2,413,231	\$ 14,858,970	\$ 59,117,798
<b>NPV TV</b>	<b>NPV TV</b>	<b>NPV TV</b>
\$ 3,024,177	\$ 18,719,348	\$ 71,360,614
<b>IRR Y5</b>	<b>IRR Y5</b>	<b>IRR Y5</b>
53%	155%	324%
<b>MIRR Y5</b>	<b>MIRR Y5</b>	<b>MIRR Y5</b>
35%	77%	126%
<b>Break-Even (nominal)</b>	<b>Break-Even (nominal)</b>	<b>Break-Even (nominal)</b>
3	1	1

Bill of Materials

The materials to build our pillow allow us to produce a premium soft good that fits within the Bearaby product portfolio (Qty = 4 sections)

Component	Item	Source	Units	Quantity used	Cost per Unit	Estimated Cost
Sleeve	TENCEL	Bearaby	Sq. Inches	717.5	\$0.01	\$6.55
Sleeve	Muslin	Amazon	Sq. Inches	264	\$0.02	\$3.97
Sleeve	Thread	RISD	Inches	608	\$0.00	\$0.34
<b>Subtotal</b>						<b>\$10.86</b>
Filling	TERRACLAY	Bearaby	Lbs.	1	\$2.95	\$2.95
Filling	Recycled Polyester	Bearaby	Oz.	3.5	\$0.90	\$3.14
<b>Subtotal</b>						<b>\$6.09</b>
Links	Buttons	RISD	Unit	10	\$1.00	\$10.00
<b>Subtotal</b>						<b>\$10.00</b>
<b>Total COGS</b>						<b>\$26.95</b>
Labor			Hours	4	\$7.00	\$28.00
<b>Total Cost</b>						<b>\$54.95</b>

# Like Bearaby products, our prototype is eco-forward by design

## The Naplow



Name	Material/Process	Qty	Amt	Unit	mPts	CO <sub>2</sub> eq. kg
<input type="checkbox"/> Clay Beads	China clay, Kaolin Ktcast Av	1	4	lb	2.85x10 <sup>-3</sup>	0.0625
<input type="checkbox"/> Muslin	Knit cotton fabric	1	0.306	lb	3.24x10 <sup>-3</sup>	0.0508
<input type="checkbox"/> TENCEL	Lyocell fiber	1	0.554	lb	0.0759	1.52
<input type="checkbox"/> Recycled Polyester	Recycled polyester	1	0.219	lb	0	0
<input type="checkbox"/> Buttons	Nickel, secondary, from ele	1	0.04	lb	1.20x10 <sup>-3</sup>	0.0338
<b>Manufacturing total</b>					<b>0.0832</b>	<b>1.67</b>

Impacts per functional unit

**0.028** mPts per 1 year of use

Total amount of service delivered

3 x 1 year of use

Impacts of total service delivered

0.083 mPts

Assessment level

Estimate

Impact category	%
<b>Ecological damage</b>	
Acidification	3.33
Ecotoxicity	5.74
Eutrophication	3.8
Global warming	27.31
Ozone depletion	0.05
<b>Resource depletion</b>	
Fossil fuel depletion	14.86
<b>Human health damage</b>	
Carcinogenics	23.4
Non carcinogenics	10.83
Respiratory effects	6.86
Smog	3.81

## Competitor Product



Name	Material/Process	Qty	Amt	Unit	mPts	CO <sub>2</sub> eq. kg
<input type="checkbox"/> Polyester Beads	Polystyrene, expandable, PS	1	1	lb	0.0952	1.52
<input type="checkbox"/> Polyester	Polyester fabric	1	0.54	lb	0.237	4.55
<input type="checkbox"/> zipper	Nylon 6	1	0.14	lb	0.0261	0.585
<b>Manufacturing total</b>					<b>0.359</b>	<b>6.66</b>

~4x more CO<sub>2</sub> emissions

Impacts per functional unit

**0.12** mPts per 1 year of use

Total amount of service delivered

3 x 1 year of use

Impacts of total service delivered

0.36 mPts

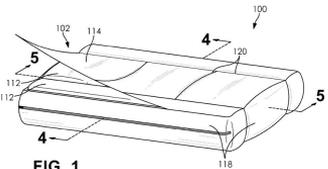
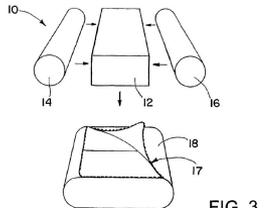
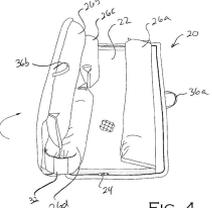
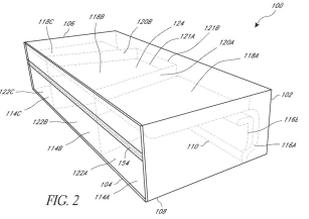
Assessment level

Estimate

Impact category	%
<b>Ecological damage</b>	
Acidification	4.28
Ecotoxicity	5.05
Eutrophication	3.6
Global warming	26.77
Ozone depletion	0.02
<b>Resource depletion</b>	
Fossil fuel depletion	24.69
<b>Human health damage</b>	
Carcinogenics	25.68
Non carcinogenics	2.59
Respiratory effects	1.58
Smog	5.76

~4x more overall environmental impact

# We believe we have a patentable innovation, and we are planning to pursue IP protection

	<b>Existing patents of similar products</b>			
	 <p>FIG. 1</p>	 <p>FIG. 3</p>	 <p>FIG. 4</p>	 <p>FIG. 2</p>
<b>Name</b>	Modular compartment pillow with multi-layered pads	Modular pillow systems	Convertible pillow system and associated methods	Adjustable pillow
<b>Patent assignee</b>	Jia Wei Yu	SLEEP Co	Annemarie V. Dockendorf, Kirk Paul Dockendorf	Matthew Adam Ryan
<b>Patent #</b>	US20230389732A1	US7681263B1	US7549183B2	US11523694B2

Our modular pillow offers adaptive support through **repositionable segments**, uniquely combining **weighted comfort**, shape retention, and **sustainable, design-forward materials** in a single, reconfigurable product.

Place your order of \$100 or more by 05/06 to get your gifts by 05/11

TAKE THE QUIZ

MOTHER'S DAY SALE

UP TO 30% OFF

Bearaby

BLOG

OUR STORY



SHOP ALL

SALE

WEIGHTED BLANKETS

PILLOWS

WARMABLES

SLEEP MASKS

WEIGHTED PLUSHIES

THROWS

Home / Pillows / Naplow

NEW

## Naplow

The perfect pillow for adapting to you, every time you need to unwind.

★★★★★ New

\$169

COLOR



QUANTITY

- 1 +

ADD TO CART

♡ Add to Wishlist



Your Turn!



## How the Naplow Works



### 1. Personalize Your Sleep

Place the logs wherever you feel comfortable when you sleep, as they detach to your choice.



### 2. Lounge Comfortably

Place logs on your back, neck and lap to be wrapped in comfort.



### 3. Make Anywhere Comfortable

Hang logs on an uncomfortable chair to improve the seating, wherever you are.



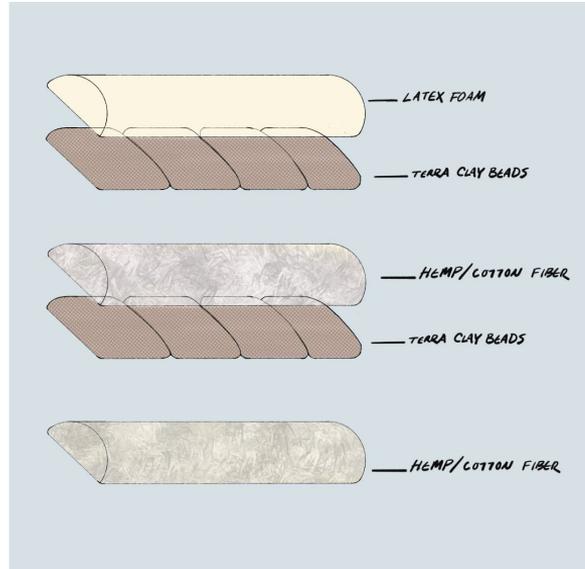
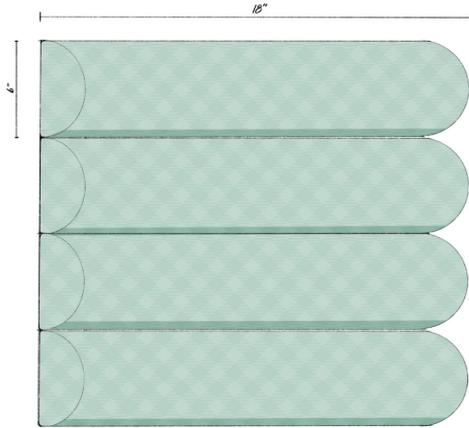
### 4. Share the Comfort

Share the Naplow logs among your loved ones.

*Thank you!*

**Appendix**

## Description & Sketches



### Core benefit of our product

The product serves consumers looking to de-stress, relax, and engage in low-stimulation activities (e.g., reading, crafting, or lying on the floor to watch TV).

Its **modular, multi-segment form** provides **adaptive support**, allowing users to reposition and configure the pillow in different ways (e.g., lap desk, neck rest, back support).

Unlike existing pillows, ours combines **weighted comfort, shape retention, aesthetically aligned materials**, and **sustainable design** within one reconfigurable product.

## Prototypes

### Low Fidelity - Toggle ver.



### Low Fidelity - Duvet Button ver.



- **IMPROVEMENTS:**
- Eliminated zippers
- Duvet buttons for easy & strong connection
- Flaps on both ends for washability
- Reduced weight for each logs

## Differences between prototype and production

- **Outer material:** Bearaby is shipping us **TENCEL** material, but we have yet to receive this. As a result, our prototype currently uses **cotton** for the outer fabric.
- **Connection:** **Higher quality duvet button** will be used in actual production.
- **Filling:** Bearaby is shipping us Recycled **Polyester filling and Terraclay**, which will replace the **cotton filling and plastic beads**.



## Competitor Products

### Yogibo

#### Pros

1. Full filling and zipper makes for a **good back support**
2. Sits **nicely on lap**
3. Easy to **transport** around

#### Cons

1. Filling is very full, which feels **rigid**
2. Texture is **not very soft**
3. Zipper mechanism is **tedious**



### InnovaGoods

#### Pros

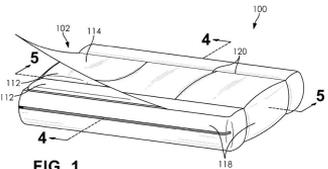
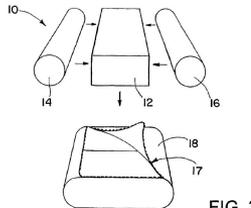
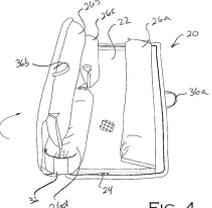
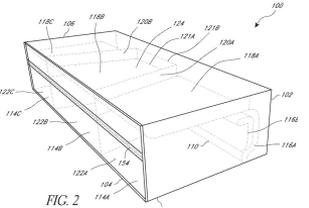
1. **Soft** texture
2. **Comfortable** to use as a headrest

#### Cons

1. Laptop **does not sit flat** on the pillow
2. Looks **"messy" with wrinkles**
3. Does not hold its **shape** after folding

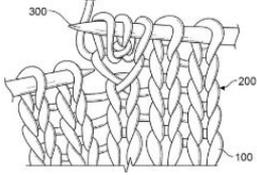
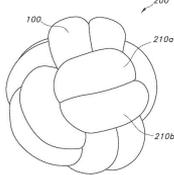
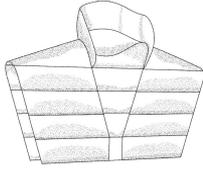
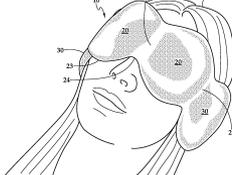
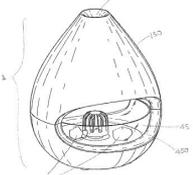
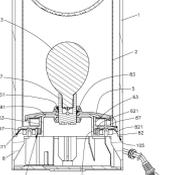


# We believe we have a patentable innovation, and we will be pursuing protection of our intellectual property

	<i>Existing patents of similar products</i>			
	 <p>FIG. 1</p>	 <p>FIG. 3</p>	 <p>FIG. 4</p>	 <p>FIG. 2</p>
<b>Name</b>	Modular compartment pillow with multi-layered pads	Modular pillow systems	Convertible pillow system and associated methods	Adjustable pillow
<b>Patent assignee</b>	Jia Wei Yu	SLEEP Co	Annemarie V. Dockendorf, Kirk Paul Dockendorf	Matthew Adam Ryan
<b>Patent #</b>	US20230389732A1	US7681263B1	US7549183B2	US11523694B2

Our modular pillow offers adaptive support through **repositionable segments**, uniquely combining **weighted comfort**, shape retention, and **sustainable, design-forward materials** in a single, reconfigurable product.

## Existing patents related to our concepts highlight opportunities to innovate in **stress-relief products**

	<b>Soft goods</b>				<b>Home goods</b>	
						
<b>Name</b>	Layered Yarn and Weighted Blanket for Deep Pressure Therapy	Resilient Pillow	Wearable neck and shoulder heating pad	Weighted sleep mask	Combination salt lamp and oil diffuser	Aroma diffuser with changing of rotating pattern lighting
<b>Patent holder</b>	Bearaby	Bearaby	Huggaroo	Melissa Bamberg	Bear Down Brands	Dongguan Yih Teh Electric Products Co.
<b>Patent #</b>	US-20240108848-A1	US-20230337841-A1	US-D851775-S	US20240216177A1	US-10905787-B2	US-11421850-B1

### Key takeaways:

- (1) Bearaby's patented **stitching techniques offer unique design language** we can adapt for soft goods innovation
- (2) **Home goods show diverse functionality**, creating opportunities to integrate calming sensory experiences

## Key Uncertainties

### Decisions To Make



**Size:** length and width of pillow sections, and proportions of whole set



**Materials:** fabric for outer sleeve and filling options



**Modularity:** number of individual pillow sections and linking mechanism



**Aesthetics:** pattern, color palette and link style to integrate with Bearaby's language

### Status



Agreed on 18' by 4.5' to closely match a regular pillow size



TENCEL for sleeve and TERRACLAY + organic latex for filling



Agreed on detachability. Exploring # sections and linking mechanism



Still exploring options for sleeve pattern/color and linking mechanism

### Mitigation Plan

**Starting with larger size**, to potentially reduce dimensions if needed

**Close interaction with Bearby's supplier** to receive materials in time. Alternatives if needed.

**Flexibility** to add/remove pillow sections if need be. Linking options for back-up

**Liaising with Bearaby's design team** to guarantee alignment. Also, sleeve and link covers easy to iterate upon to adjust style

## Bearaby A - For Attorney Patent Review (Slide 1/2)

### 1) Explain the product's market and core benefit to customers:

Our modular pillow is designed for the “wind-down” period before sleep, which is a crucial time when people transition from daily activity to rest. The product serves consumers looking to de-stress, relax, and engage in low-stimulation activities (e.g., reading, crafting, or lying on the floor to watch TV). Its **modular, multi-segment form** provides **adaptive support**, allowing users to reposition and configure the pillow in different ways (e.g., lap desk, neck rest, back support). Unlike existing pillows, ours combines **weighted comfort, shape retention, aesthetically aligned materials**, and **sustainable design** within one reconfigurable product.

### 2) Conduct a patent search and provide references to any related US patents:

Through a preliminary search, we identified the following relevant prior patents (see below). These patents highlight different methods of modularity, configuration, or filling customization, but none mirror our specific **modular, soft-good construction with Bearaby-style textile design, weighted-yet-repositionable properties**, or **attachment system**:

- Modular compartment pillow with multi-layered pads (<https://patents.google.com/patent/US20230389732A1/en>)
  - “A modular compartment pillow includes a main body, a plurality of compartments housed in a cavity in the main body, and at least one opening. The opening provides access to at least one compartment.”
- Modular pillow systems (<https://patents.google.com/patent/US7681263B1/en>)
  - “Modular pillow systems include one or two individual bolster component(s) and a traditional pillow component... the density and diameter and/or size of the individual modular components may be selected based on the anatomical characteristics and/or comfort and support characteristics of the user...”
- Convertible pillow system and associated methods (<https://patents.google.com/patent/US7549183>)
  - “A combination pillow and enclosed area system includes an enclosing bottom member, and a plurality of bumper members. The enclosing bottom member is moveable between folded and unfolded positions and includes a closure device connected thereto that is moveable between opened and closed positions...”
- Adjustable pillow (<https://patents.google.com/patent/US11523694B2/en>)
  - “An adjustable orthopedic pillow includes a plurality of sections separated by dividers. Each section includes a head support fill chamber, a comfort layer fill chamber, a primary cervical support fill chamber, and a secondary cervical support fill chamber...”

## Bearaby A - For Attorney Patent Review (Slide 2/2)

3) Describe what invention(s) within your product may be patentable, and provide a statement of the invention's novelty, utility, and non-obviousness:

- **Invention Description:**

A soft, modular pillow composed of multiple connected or connectable segments. Each segment is filled with weighted or supportive materials (e.g., bio-beads, foam) and connected using fabric-based toggle loops or zipper strips (similar to duvet covers). The form factor allows for multiple usage configurations, such as stacking, folding, or wrapping, while maintaining visual softness and material sustainability.

- **Novelty:**

Our design introduces a **duvet-style, fabric-based segment-connection system** (as opposed to hook/loop or plastic snaps), with **aesthetic cohesion across segments**, and **custom filling options** tailored for different ergonomic needs. The combination of **soft modularity + sustainable materials + versatile function + Bearaby knit aesthetic** is not present in existing pillow patents.

- **Utility:**

The pillow serves multiple use cases (neck rest, floor lounger, lap desk) while maintaining comfort and visual appeal. It is also washable, portable, and maintainable.

- **Non-obviousness:**

Though modular pillows exist, combining **repositionable, weighted segments** with **Bearaby's calming aesthetic, sustainability standards**, and **multi-use ergonomics** is not an obvious extension of current art. Our fastening method and materials provide a distinct departure from rigid modular systems, offering both emotional and physical comfort.

# Design / Decision Matrix

WEARABLE			Sensory Sleep Mask		Ankle / Wrist Weights		Robe		Beaded Slippers / Socks	
			Option A		Option B		Option C		Option D	
Customer Needs		Weights	Base Score (1-5)	Weighted Score	Base Score (1-5)	Weighted Score	Base Score (1-5)	Weighted Score	Base Score (1-5)	Weighted Score
7 Cost	1= expensive, 5=cheap	4	2	0.08	4	0.16	2	0.08	4	0.16
1 Stress Relief	1 = stress, 5 = relief	30	4	1.2	2.5	0.75	2	0.6	4	1.2
5 Ease of Cleaning	1 = hard, 5 = easy	10	3	0.3	4	0.4	5	0.5	3	0.3
2 Bearaby Brand / Aesthetics	1 = stands out, 5 = fits in	20	5	1	3.5	0.7	3.5	0.7	3	0.6
3 Sustainable Material	1 = harmful, 5 = sustainable	15	3	0.45	5	0.75	5	0.75	4	0.6
6 Durability / Multi-use	1 = single use, 5 = multi use	6	3	0.18	3	0.18	4	0.24	4	0.24
4 Ease of use	1 = hard, 5 = easy	12	3	0.36	5	0.6	5	0.6	4	0.48
8 Versatility / Multi-setting	1 = single, 5 = multi setting	3	5	0.15	3	0.09	4	0.12	4	0.12
<b>Total Weighted Score:</b>		100		<b>3.72</b>		<b>3.63</b>		<b>3.59</b>		<b>3.7</b>

HOMEGOOD			Diffuser Lamp Speaker		Lamp Pillow		3 Fold Pillow	
			Option A		Option B		Option C	
Customer Needs		Weights	Base Score	Weighted Score	Base Score	Weighted Score	Base Score	Weighted Score
9 Cost	1= expensive, 5=cheap	5	1	0.05	2	0.1	4	0.2
1 Stress Relief	1 = stress, 5 = relief	30	1	0.3	3	0.9	4	1.2
8 Portability / Size	1 = large, 5 = small / portable	5	1	0.05	2	0.1	4	0.2
2 Bearaby Brand / Aesthetics	1 = stands out, 5 = fits in	22	1	0.22	3	0.66	5	1.1
4 Sustainable Material	1 = harmful, 5 = sustainable	9	1	0.09	2	0.18	4	0.36
5 Durability / Multi-use	1 = single use, 5 = multi use	6	5	0.3	3	0.18	4	0.24
3 Ease of use	1 = hard, 5 = easy	11	1	0.11	3	0.33	5	0.55
6 Versatility / Multi-setting	1 = single, 5 = multi setting	6	5	0.3	2.5	0.15	4.5	0.27
7 Safety	1 = unsafe, 5 = safe	6	2	0.12	3	0.18	5	0.3
<b>Total Weighted Score:</b>		100		<b>1.54</b>		<b>2.78</b>		<b>4.42</b>

During the “wind-down” period, consumers prioritize **low-stimulating environments**, engage in **hands-on** or **passive** activities, establishing a **consistent routine** to improve sleep quality

12 interviewees over the age of 18+ mentioned avoiding the screen and doing a **hands-on activity** helps them wind down (quilting, reading, meditating)

**“I have the tv in the background for some noise... and I end up falling asleep with my crochet in my hands” (F, 64)**

**“I like reading mystery books before bed while tucked under my quilt” (F, 19)**

8 Interviewees over the age of 35 specifically rely on **auditory relaxation techniques** to improve their sleep quality (white noise, podcasts, etc)

**“I listen to this playlist on Spotify called ‘Sleep Fruits’...it’s various ambient noises” (F, 37)**

**“I started listening to podcasts like NPR, and soon enough I wouldn’t be able to fall asleep unless I had it on before bed” (F, 48)**



# Naplow

*Spring 5 - May 8, 2025*

*a part of the Bearaby portfolio*

*Bearaby Team A:  
Alex, Iago, Natalie,  
Sabal, Stanley, Thaya, Vic*