


LEMON 'π'

Untapped Guests // Lifecycle Assessment

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 lululemon x gravity sketch

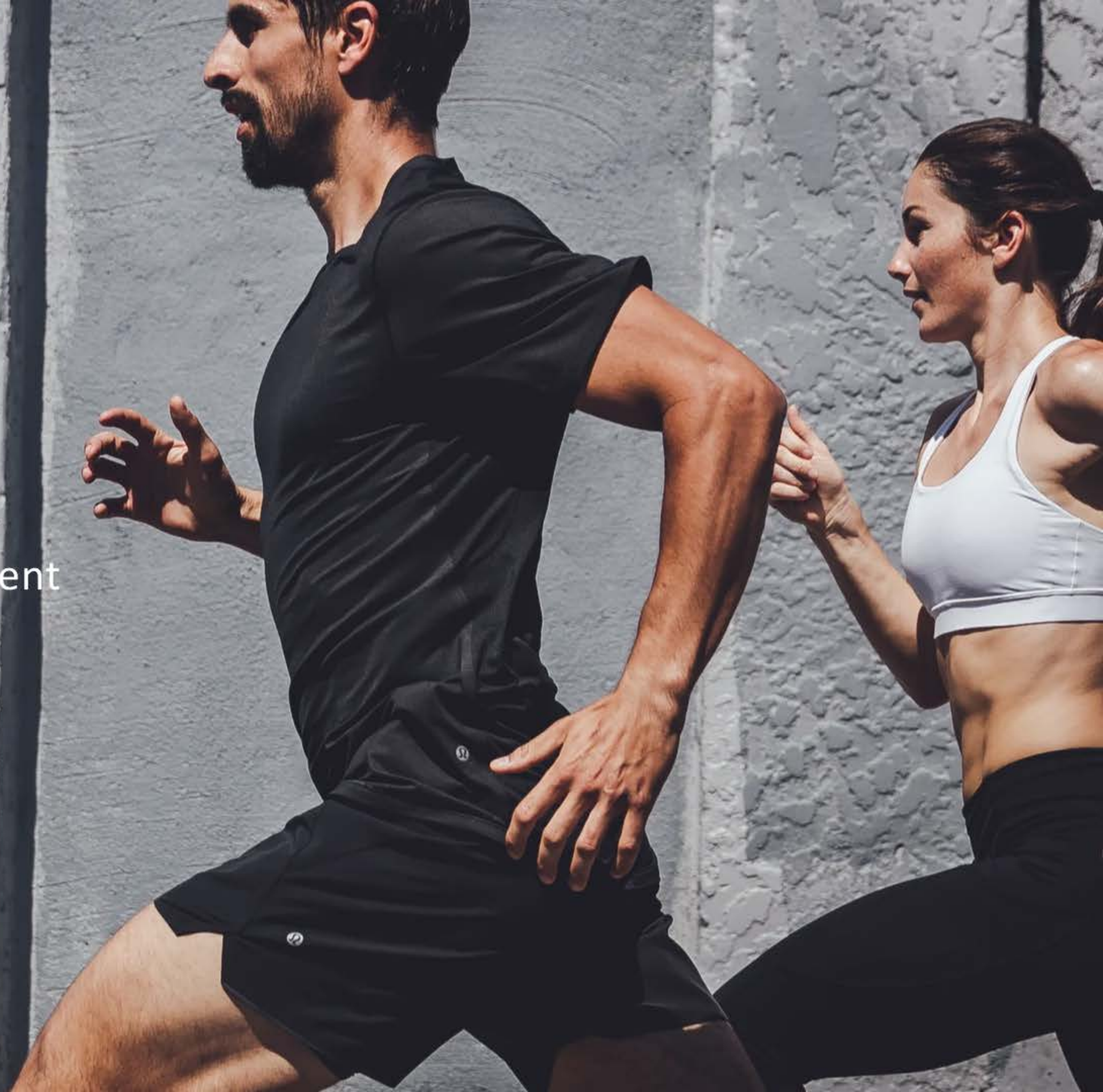


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**Mindful
Movement is...**



Future is...



tech integration.

Future is...

reduced consumerism.

lululemon x gravity sketch 2023

Future is...



knowledge as currency.

lululemon x gravity sketch 2023

Future is...



novel transportation.

lululemon x gravity sketch 2023

Future is...

increased urbanization.

Generation Alpha

Empowered to act
Experience over product
Hands-on learning

Enlightened Naturalist

creating knowledge through symbiosis



Circle of Knowledge

Enticed Adventurist

experiencing knowledge through adventure

Empowered Biophilic

sharing knowledge through immersion

Mindful Movement:
knowledge through movement



lululemon x gravity sketch 2023

Enlightened Naturalist

Generated with MidJourney

creating knowledge through
symbiosis

ENLIGHTENED NATURALIST

lululemon x gravity sketch 2023

Freedom

Generated with MidJourney

ENLIGHTENED NATURALIST

Rebuild connection

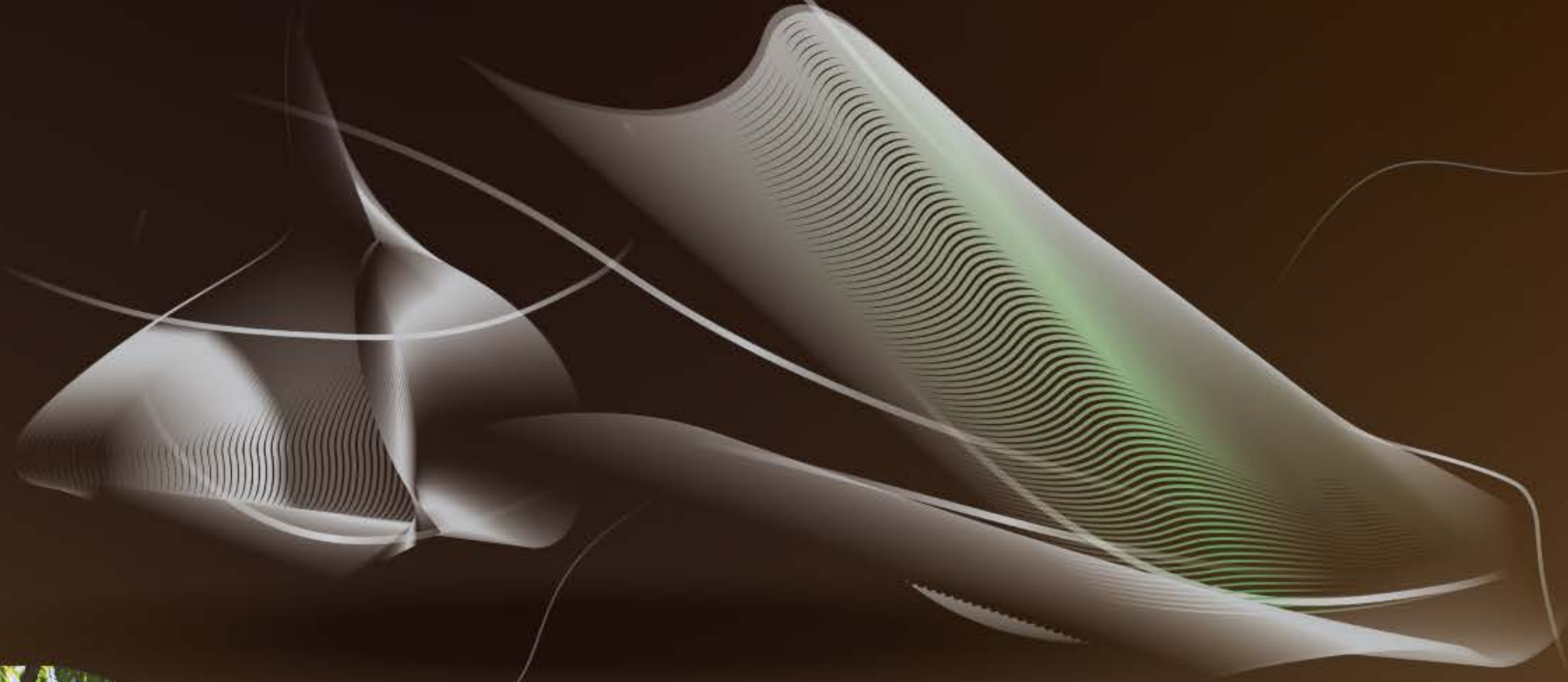
Generated with MidJourney



Learning

Educating

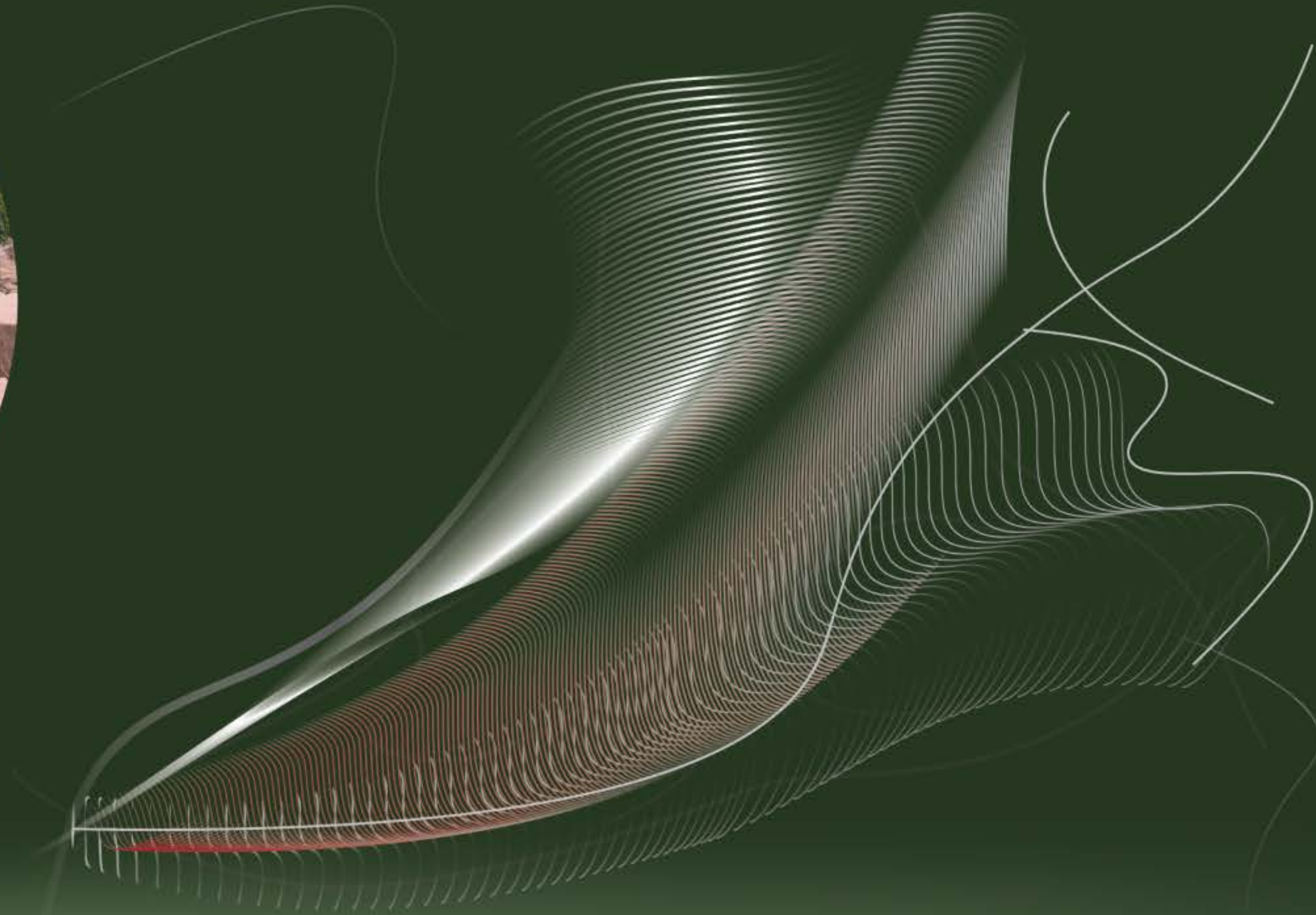
ENLIGHTENED NATURALIST



lululemon x gravity sketch 2023

A shoe designed to meet the need for self-sufficiency, making the collection of natural vegetables and fruits easier.

ENLIGHTENED NATURALIST



An innovative amphibious shoe that enhances all five senses for an immersive experience, and can benefit to both land and water ecosystem.

Modular Midsole Pieces

Enlightened Naturalist

creating knowledge through symbiosis



Circle of Knowledge

Enticed Adventurist

experiencing knowledge through adventure

Empowered Biophilic

sharing knowledge through immersion

Mindful Movement:
knowledge through movement



Empowered Biophiliac

Generated with MidJourney



sharing knowledge through
immersion

EMPOWERED BIOPHILIAC

Philomath

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Educator





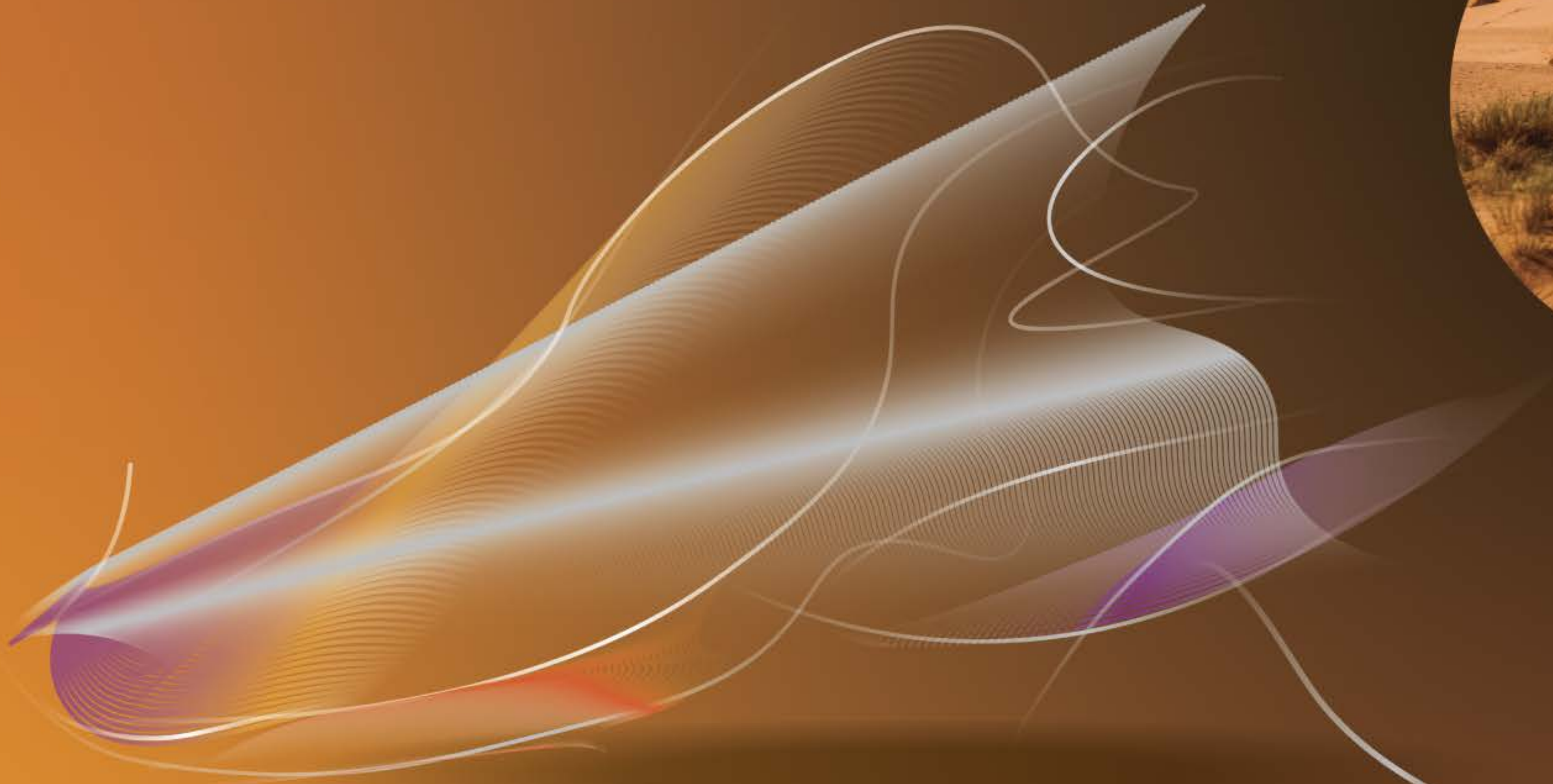
lululemon x gravity sketch 2023

Shared Senses

Bridge the gap



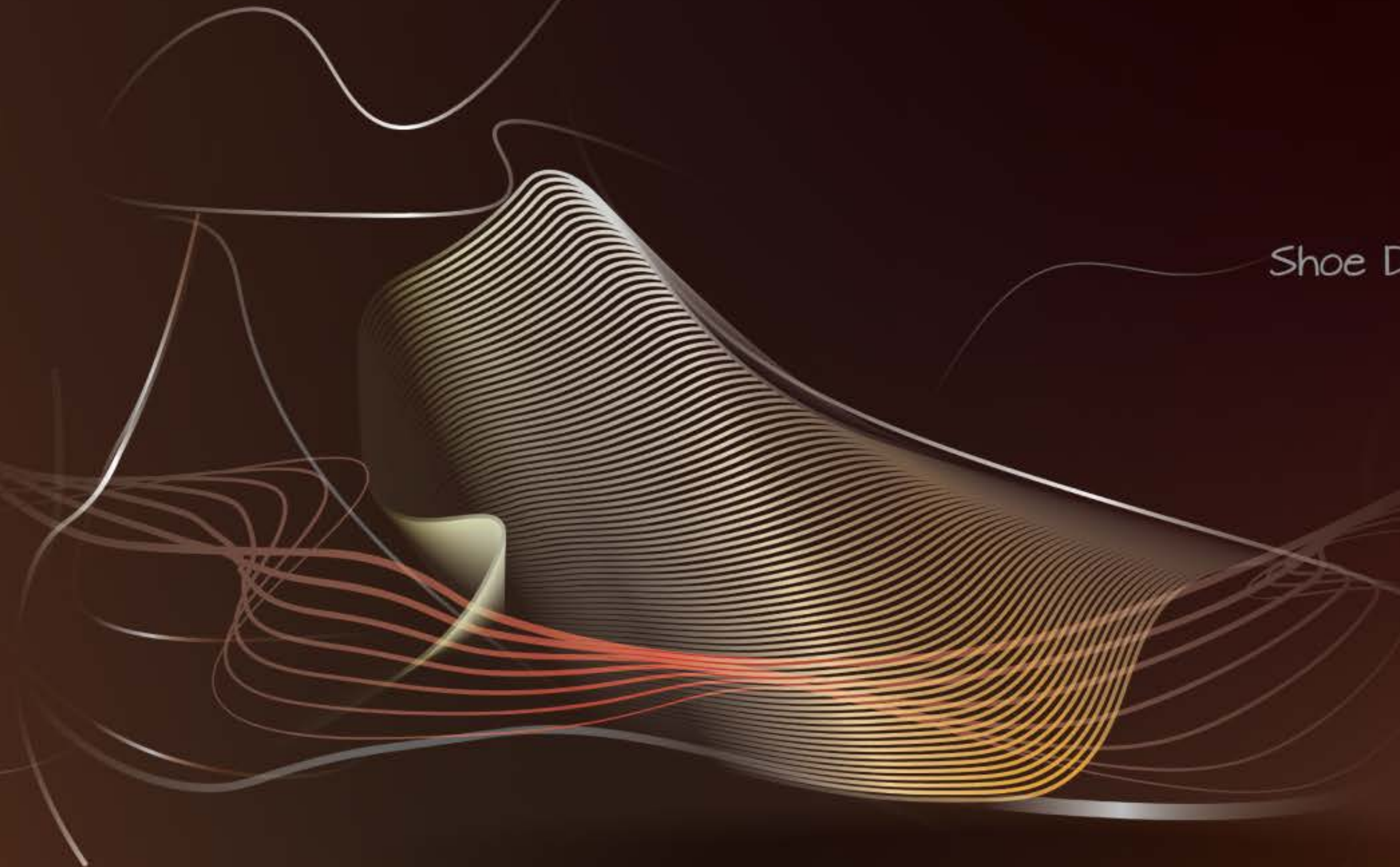
EMPOWERED BIOPHILIAC



A cutting-edge shoe that captures sensory experiences with recording system and enables remote real-time sharing with people in the city.



Shoe Design Concept



A desert-adaptive shoe designed to withstand and adapt to the harsh environment - sand clearing, temperature control, and built-in safety measures to protect against venomous wildlife, as well as providing essential first aid treatment.



Enlightened Naturalist

creating knowledge through symbiosis



Circle of Knowledge

Enticed Adventurist

experiencing knowledge through adventure

Empowered Biophilic

sharing knowledge through immersion

Mindful Movement:
knowledge through movement



Enticed Adventurist



experiencing knowledge
through adventure



Taste for adventure

Inspired



Adventure tourist



Harnessing technology

Untouched nature

How might we reach the ultimate immersion?





How might each step
into the glaciers feels
like home?

Enlightened Naturalist

creating knowledge through symbiosis



Circle of Knowledge

Empowered Biophilic

sharing knowledge through immersion

Enticed Adventurist

experiencing knowledge through adventure

Mindful Movement:
knowledge through movement

How do we innovate?

Sustainability is...

**You are
what you
wear**

Mindful movement.



What if our movement could power our technology?



lululemon x gravity sketch 2023

What if we provided plans,
not products?

A pair of white sneakers with green accents is lying in a field of colorful wildflowers. The sneakers are positioned in the center of the frame, surrounded by various flowers in shades of pink, purple, and yellow. The background is a soft-focus landscape with green hills and a clear sky.

What if we grew our footwear?
.... or made them from anything?

What if our footwear helped us learn more
about nature?

Trends

1. Climate urgency will shape new educational and career opportunities and choices
2. Apprenticeships and on-the-job education will increase as university enrollment decreases
3. Urban populations will almost double over next 25 years
4. Luxury will further integrate wellness to give indulgence deeper purpose
5. By as early as 2025, Gen Alpha will become largest generation in history

2040 Predictive Stats:

66%

of population will live in cities by 2040

60 %

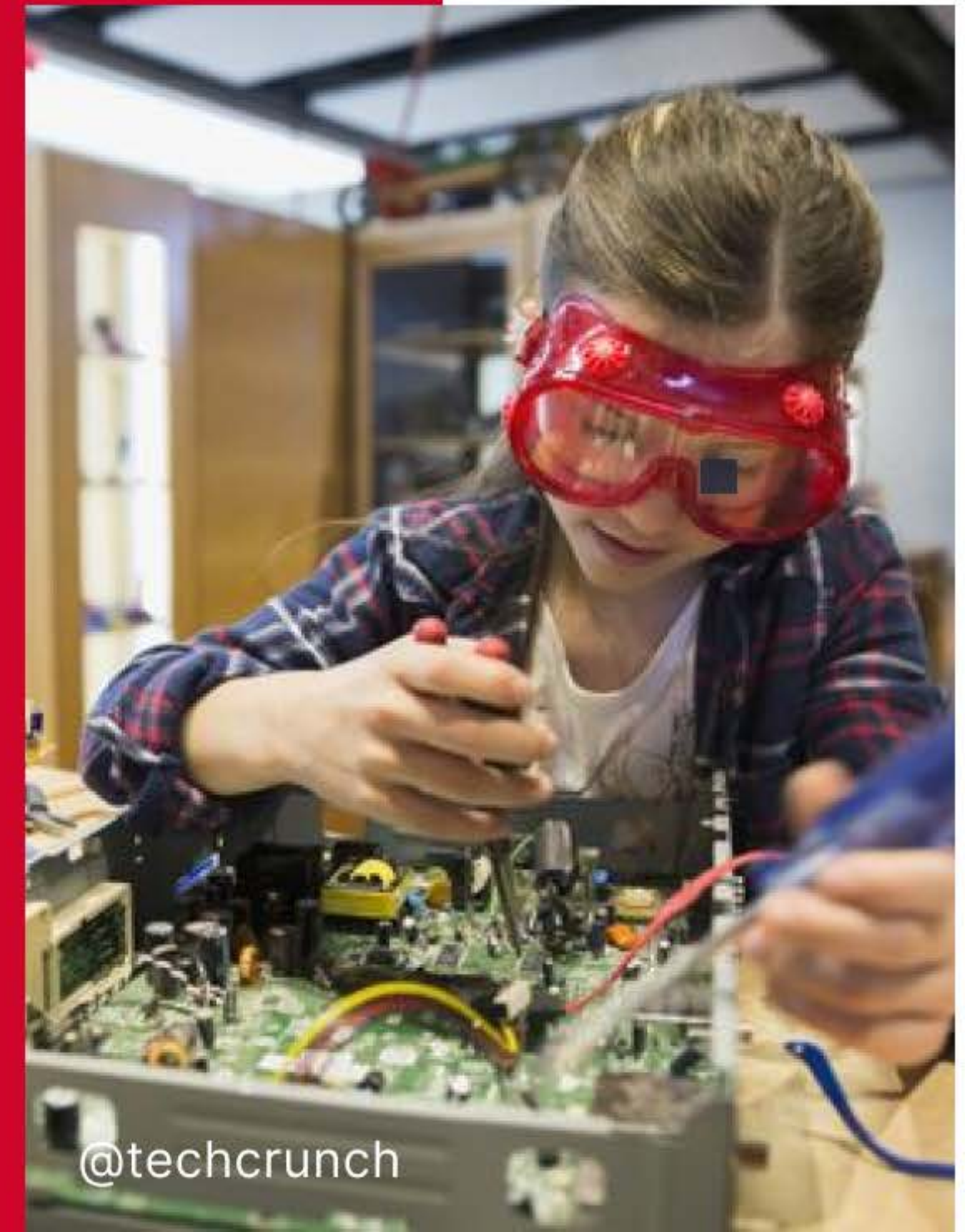
of all US health and wellbeing spending will be preventative by 2040

-61k

estimated reduction in lifetime income of current young students due to Covid's impact on education

Overview

1. Gen Alpha includes those born between 2011-2025
2. Even amidst social, political and economic issues this generation is predominately hopeful for future
3. Expected to be early bloomers physically, socially, and psychologically
4. Covid will have lasting impacts on shaping Gen Alpha's lives
5. Feel responsibility to reverse social and environmental damage of past generations from young age



Values

1. Experiences over products
 2. Environmental and social awareness and responsibility
 3. Creativity
 4. Resilience
-
1. Technology as power for good
 2. Pragmatism
 3. Hands on learning
 4. Ownership of future / Influence

Key Stats:

48%

of already think about the environment once a week

67%

of current 6-9 year olds want to have a career that helps save the planet

70%

of US parents say their Gen Alpha kids already have a big influence over family spending

Overview

1. Feel connected with the world around them
2. Purists when it comes to the outside world
3. Create knowledge through connection with nature
4. Use nature as medicine
5. Take from nature and bring back to nature



Generated with MidJourney



Generated with MidJourney

Values

1. Human-nature connection
2. Self-sufficiency
3. Pursuing real freedom, physically and spirituality
4. Holistic wellbeing
5. Harmoniously coexisting with the nature
6. Sharing knowledge gained from nature with community

Key Stats:

79%

of campers planning to visit a national or state park within the next year

168.1 Million

In 2022 the outdoor recreation participant base grew

80%

of outdoor activity categories experienced participation growth

Themes

Brand value alignment

The enlightened naturalist and Lululemon share the same value about sustainability, both making sustainability and the use of natural materials a priority. Acting on their environmental responsibility, the enlightened naturalist aims to minimize their ecological footprint by employing sustainable practices throughout their footwear choices and daily activities.

Mindful movement

The enlightened naturalists usually form tribes in the wild and live in a self-sufficient manner. By immersing themselves in nature, these enlightened naturalists have gained extensive knowledge of outdoor living and biology. They create knowledge through symbiotic relationships.

Universal design

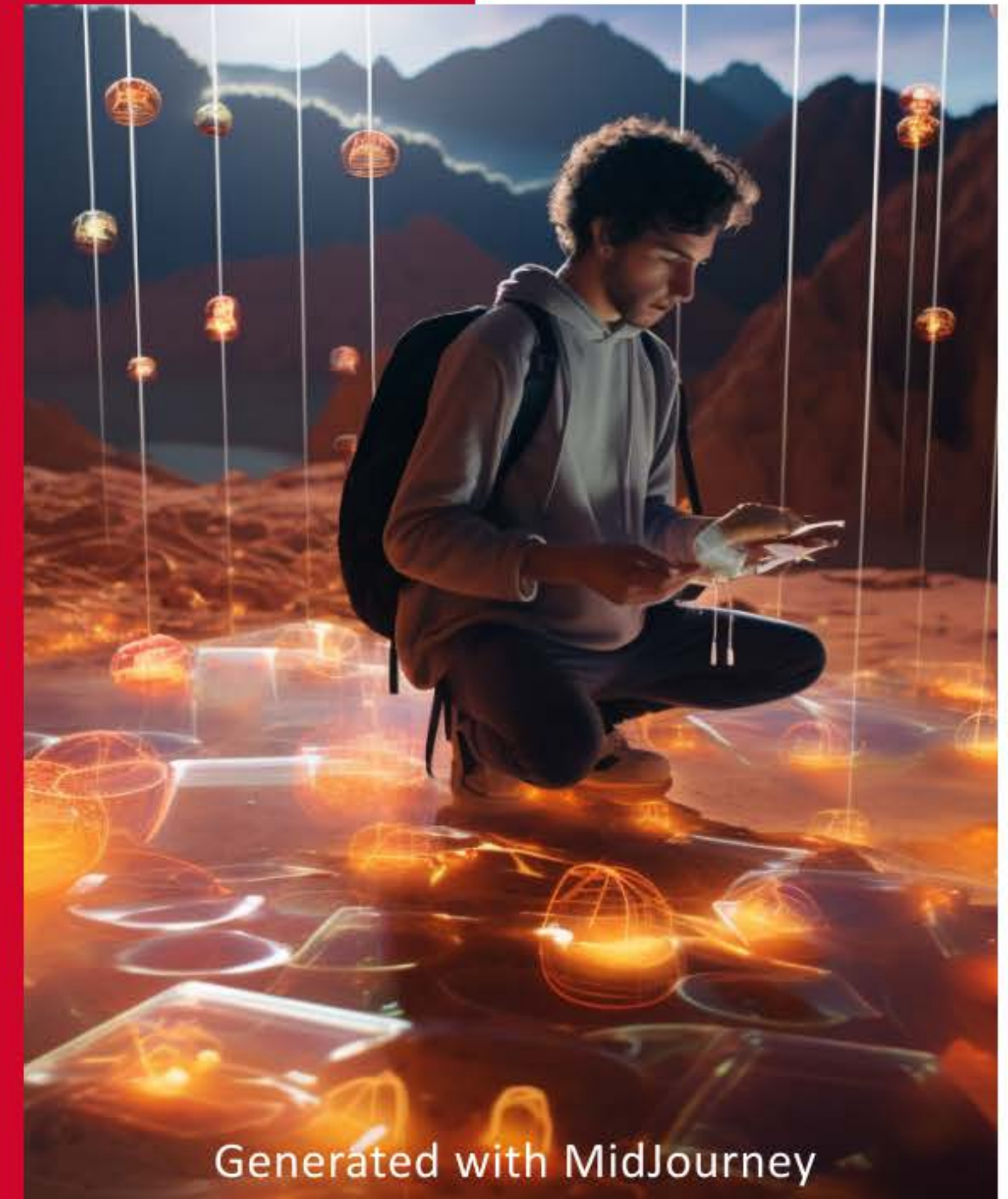
Due to rapid urbanization, urban people aspire to escape to nature and become "enlightened naturalists." Motivated by the desire to reconnect with nature, address environmental concerns, improve well-being, escape urban stress, and pursue personal growth, they seek a sustainable lifestyle closer to the natural world.

Biodiversity

By embracing the enlightened naturalists lifestyle, individuals can find solace, promote sustainability and biodiversity, benefit from nature's positive impact, and acquire skills for outdoor living and self-sufficiency. This trend will reflect a common yearning among urban dwellers for a meaningful existence intertwined with the tranquility and harmony of nature.

Overview

1. Feel enabled and empowered to act through technology
2. Pursue non-traditional self-led learning opportunities
3. Shares knowledge to those interested in learning more
4. Incorporates technology into learning for a more immersive experience
5. Enjoys exploration in nature



Values

1. Positive impact
2. Educational pursuits
3. Hands-on or immersive learning
4. Empowering others
5. Entrepreneurship
6. Well-being

Key Stats:

65%

of students starting school now will work in jobs that don't exist yet

51%

of current Gen Alpha 6-9 year olds want a career that allows them to use technology to make a difference

46%

of Gen Alpha say they want to pursue a career that lets them work outdoors

Themes

Brand value alignment

Lululemon's brand values of entrepreneurship, connection, fun, and inclusion all encompass values and drivers for this guest's career pursuit to enable others to learn and experience our outdoor environments. Highlighting how lululemon products and experiences help to put these values in action will emphasize the lululemon advantage.

Mindful movement

This guest finds mindful movement by sharing knowledge through immersion. Creating footwear products and experiences that seamlessly enable this guest to better experience, learn, and teach in natural environments will cater to their goals.

Universal design

The Empowered Biophiliac seeks to make outdoor experiences and education accessible to all through their immersive learning experiences. Helping to enable these inclusive experiences will speak to not only this guest but those who they seek to teach.

Biodiversity

Enabling a greater connection between this guest and nature will help further their interest and dedication to environmental stewardship. Careful consideration of materials to enable their mindful movement without sacrificing sustainability will be key to showing an understanding of this guest.

Overview

1. Adventure tourist interested in extreme outdoor activities
2. Utilize existing knowledge to empower their adventures
3. Inexperienced in outdoor sports pursuits
4. Reliant on technology to support outdoor adventures
5. Appreciate value of 'preparewear' for adventures and use in the city given climate change impacts



Values

1. Adventure
2. Untouched natural landscapes and wildlife
3. Escapism
4. Bold, moonshot ideas and experiences
5. Harnessing technology and knowledge
6. Preparedness
7. Inclusivity

Key Stats:

47%

of Gen Alpha say they prefer to split their time between screen time and being outdoors

x5

expected growth in the adventure tourism market over next 10 years

60%

of adventure tourism market is low risk excursions that still offer adventure

Themes

Brand value alignment

The values of curiosity, innovation, and courage at lululemon speak directly to this guest who sees these values as key drivers and enablers of their outdoor adventure pursuits. Continuing to highlight these values in tangible products and experiences, as well as brand related storytelling, will help captivate, inspire, and empower this guest.

Mindful movement

This guest finds mindful movement by experiencing knowledge through adventure. Enabling adventurous outdoor pursuits, regardless of experience level, will help empower mindful movement for this guest and additionally enable new less experienced guests to find mindful movement through outdoor adventures they previously viewed as inaccessible.

Universal design

Outdoor athletics and adventure sports have typically highlighted young, white, fit, and able-bodied males. Not only using, but actively promoting, inclusive imagery and design will help demonstrate an understanding of this guest who recently began seeing themselves as included in the outdoor adventure community.

Biodiversity

With this guests focus on extreme adventure and wide ranging exploration, enabling versatile functionality, fit for the diverse environments they experience, will empower their experience of biodiversity. Enabling means to help them protect the untouched natural environments they seek with really win over this guest.

Sustainability is...

**You are
what you
wear**

Mindful movement.



Blissfeel 2 Life Cycle Assessment

OVERVIEW

Scope

The life cycle assessment (LCA) is a comprehensive method to assess the environmental impact of a product through its full life cycle, from raw material extraction to disposal. The scope of this analysis is limited to the information provided by the lululemon team and online for standard shoe materials. This LCA will consider the various materials comprising the shoe but will not analyze specific quantities of each material used.

Given the forward looking nature of the concept development, and the rapid development of material technologies, the materials will be analyzed without regards to industry standards that may become irrelevant by the anticipated product cycle for the new designs.

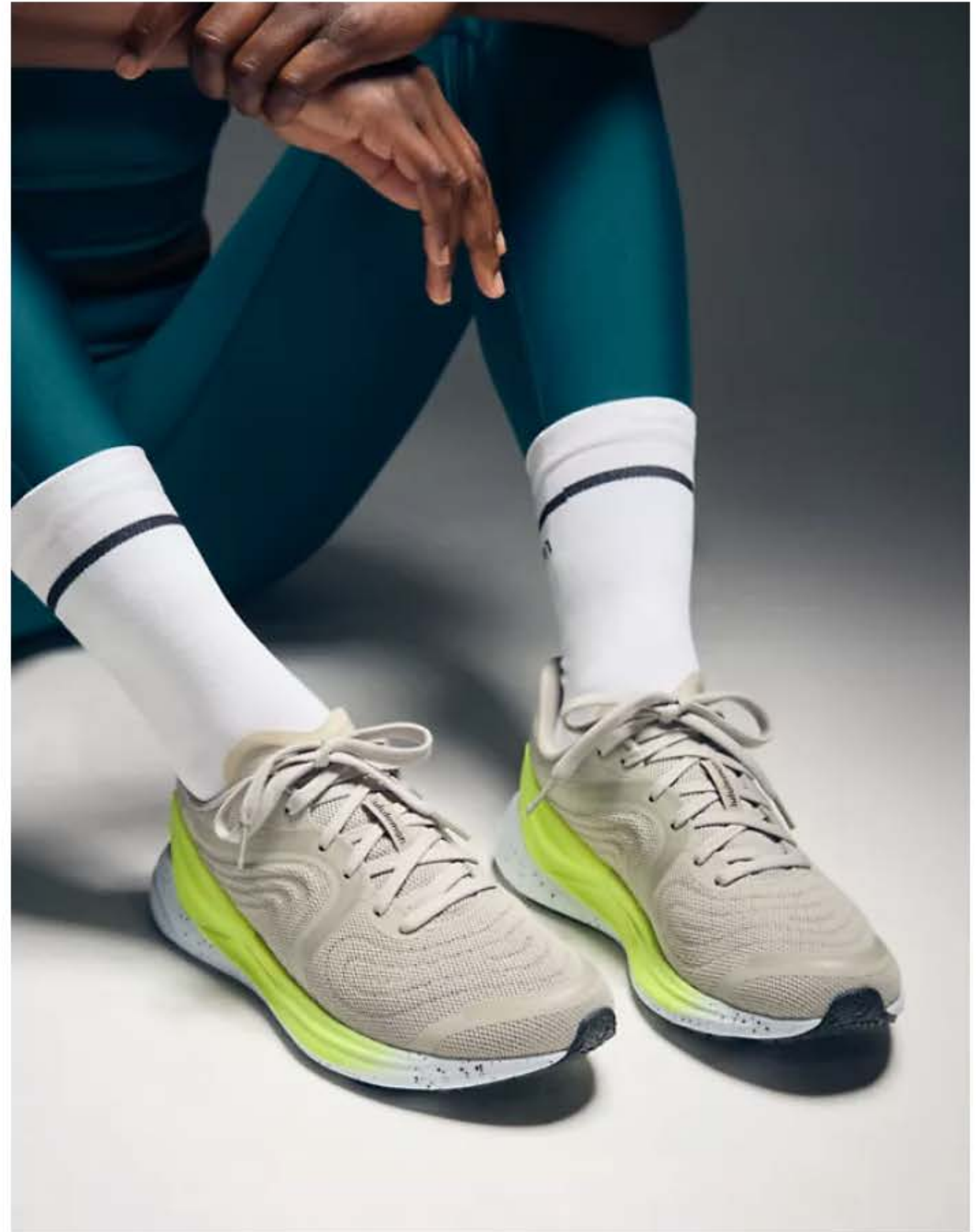
Thus, this LCA seeks to be a comprehensive analysis of all impacts of the materials included in the shoe to identify all potential opportunities for improvement including new sourcing methods. Though some of the components feature recycled materials, raw material extraction and material processing of the materials prior to recycling will also be included to fully assess the environmental implications of the materials in use.



OVERVIEW

Product Description

The Blissfeel 2 is the second generation women's running shoe by lululemon. The shoe was specifically designed for the female foot to improve fit and feel for female runners. Featuring a seamless upper, 3D-molded midfoot, foam cushioning and durable outsole the design seeks to balance comfort, support, and durability.



From lululemon Blissfeel 2 product page.

OVERVIEW

Functional Unit

Impact per product unit of service

=

Impact
3 months of running



OVERVIEW

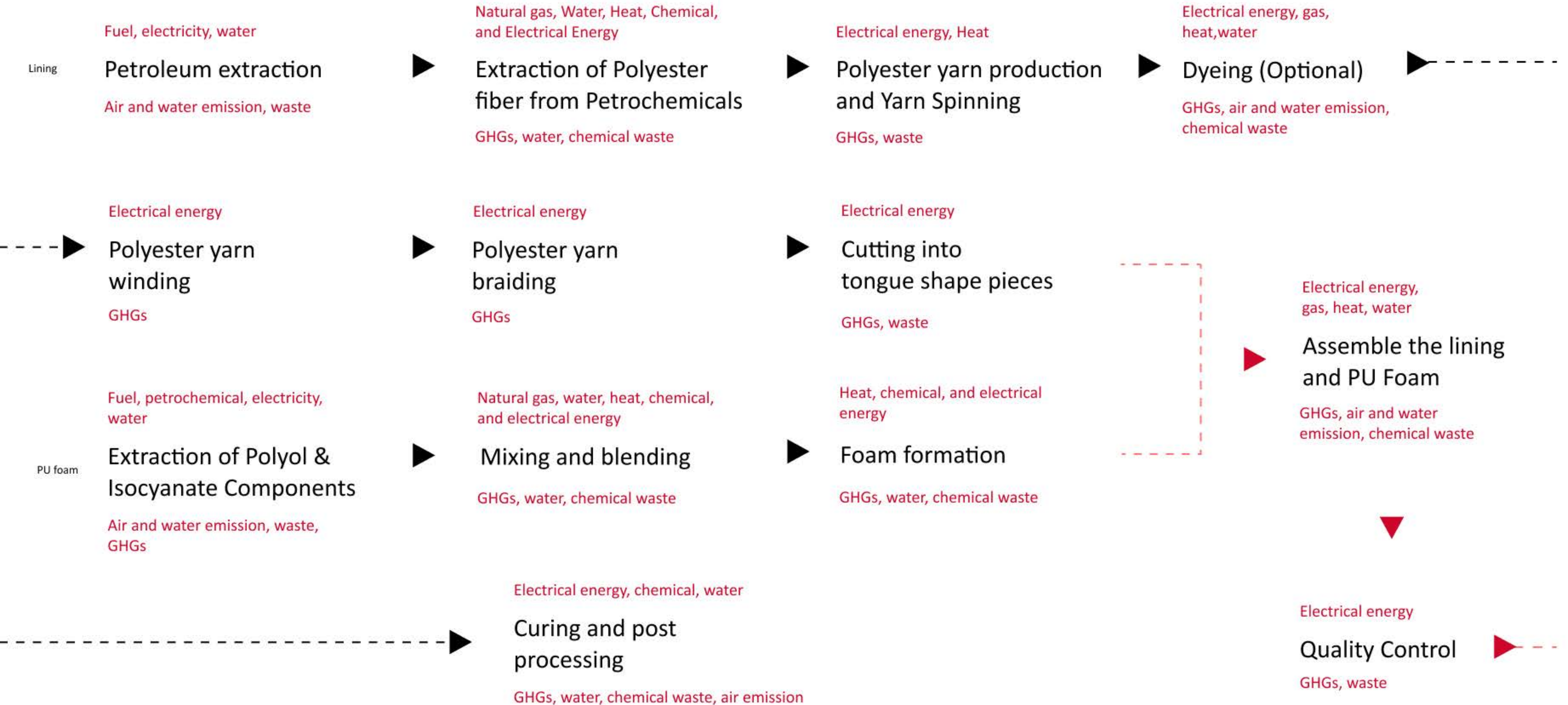
Component Analysis



lululemon Blissfeel 2

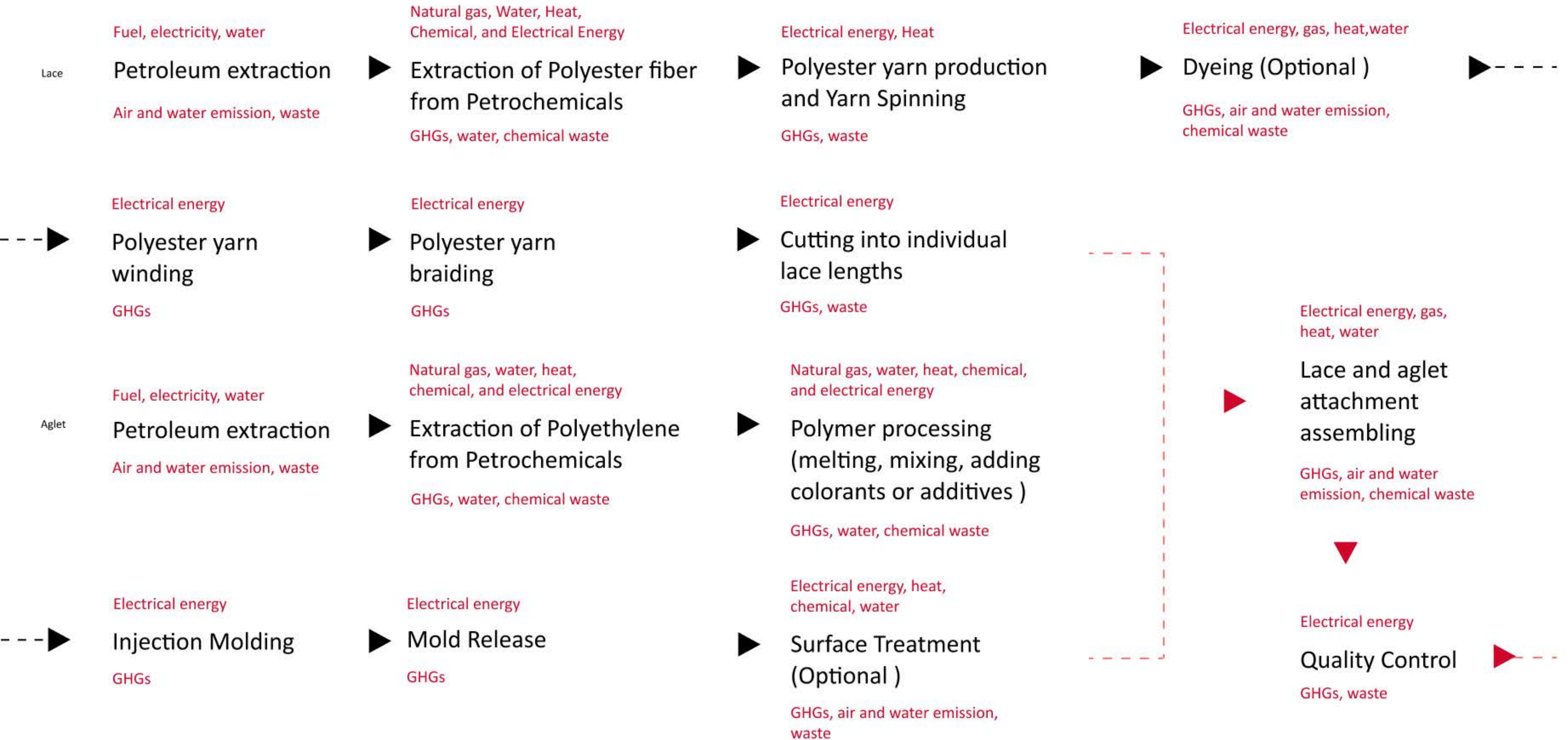
TONGUE (RECYCLED POLESTER + PU FOAM)

Process Tree.



SHOELACES (RECYCLED POLYESTER + POLYETHYLENE)

Process Tree.



RECYCLED MESH UPPER (POLYESTER DERIVED)

Process Tree.

Natural gas, Water, Heat, Chemical, and Electrical Energy

Extraction of Polyester fiber from Petrochemicals

GHGs, water, Chemical waste



Natural gas, Water, Chemical, Electrical

Fiber Production/ Polymerization

GHGs, chemical waste, water



Mechanical energy, Water, Electrical Energy, Natural gas

Weaving/Knitting polyester fibers into mesh material

GHGs, chemical waste, water, mechanical energy



Chemical, Electrical energy, Water

Dyeing and Finishing

GHGs, chemical waste, water, Mechanical energy



Mechanical energy, Heat energy, Natural Gas

Transportation / Distribution

GHGs, Water, Chemical Waste



TPU HEELCLIP (THERMOPLASTIC POLYURETHANE)

Process Tree.

Mechanical energy, heat energy,
electrical energy, fuel, natural
gas, crude oil

Polyol, Isocyanate(MDI),
Chain extender extraction

GHGs, Minimal toxins from
chemical reaction



Chemical, electrical energy

Polymerization

GHGs, chemical waste



Mechanical energy, heat energy,
electrical energy

Aromatic TPU process

GHGs, waste



Electrical energy, heat
energy, mechanical energy

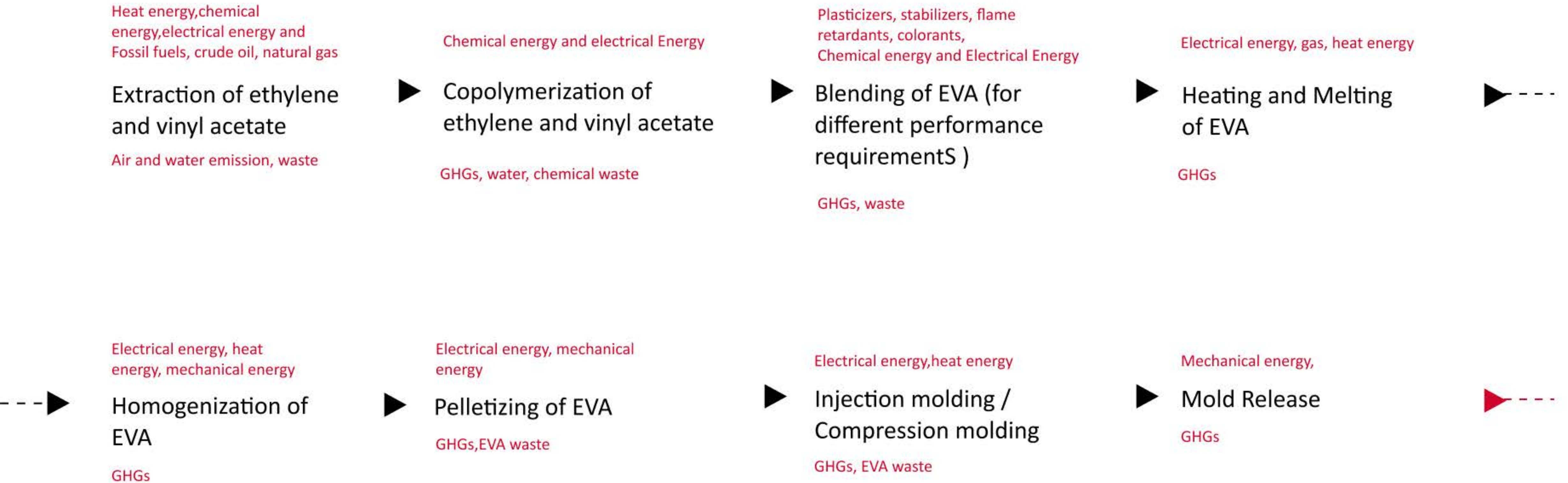
Compression Molding/
Injection Molding

GHGs,TPU waste



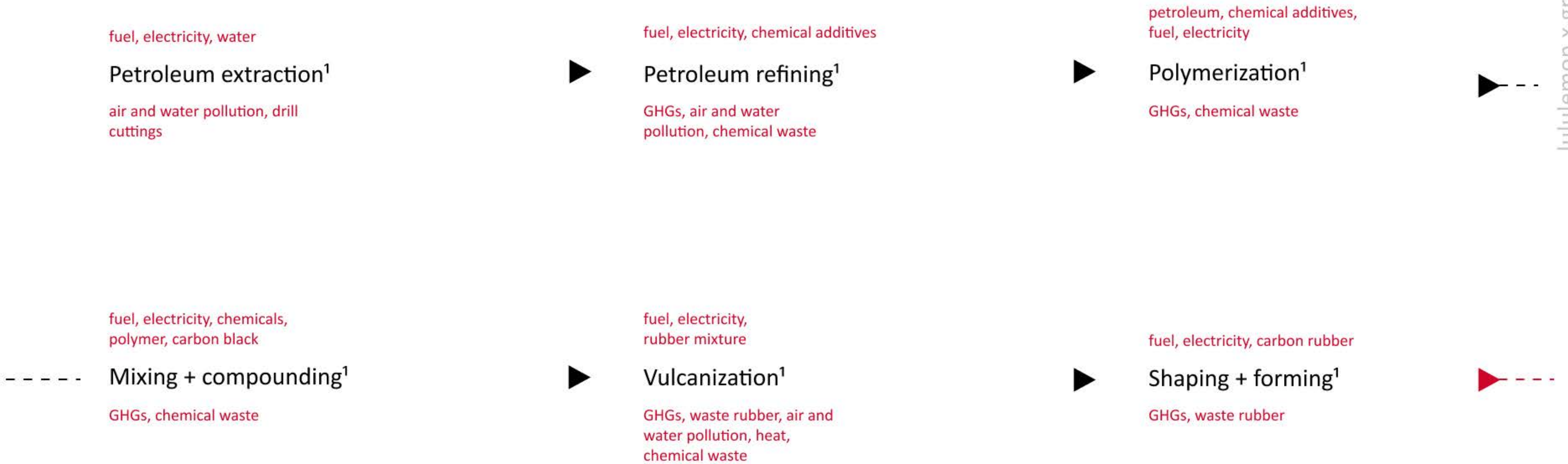
MIDSOLE (ETHYLENE-VINYL ACETATE)

Process Tree.



OUTSOLE (ABRASION RUBBER)

Process Tree.



ASSEMBLY, USE & END OF LIFE

Process Tree.



IMPACT MATRIX

Legend

Highly negative impact = ●

Negative impact = ●

Neutral impact = ●

Positive impact = ●

Not applicable = ○



@willitrn

AVERAGE SHOE IMPACT

Impact Matrix

	Resource depletion	Global warming	Ozone layer depletion	Acid rain // Acidification	Solid waste	Land degradation	Water pollution	Air pollution	Reduced biodiversity
Raw material extraction	●	●	●	●	●	●	●	●	●
Material processing	●	●	●	●	●	●	●	●	●
Component manufacturing	●	●	●	●	●	●	●	●	●
Assembly and packaging	●	●	●	●	●	●	●	●	●
Distribution and purchase	●	●	●	●	●	●	●	●	●
Installation and use	●	●	●	●	●	●	●	●	●
Maintenance and upgrading	●	●	●	●	●	●	●	●	●
Cycle: Reuse (product/components)	●	●	●	●	●	●	●	●	●
Cycle: Recycling (materials)	●	●	●	●	●	●	●	●	●
Cycle: Disposal (incineration/landfill)	●	●	●	●	●	●	●	●	●

lululemon x gravity sketch 2023

Impact Matrix.

	resource depletion	global warming	ozone layer depletion	acid rain // acidification	solid waste	land degradation	water pollution	air pollution	reduced biodiversity
raw material extraction	●	●	●	●	●	●	●	●	●
material processing	●	●	●	●	●	●	●	●	●
component manufacturing	●	●	●	●	●	●	●	●	●
assembly and packaging	●	●	●	●	●	●	●	●	●
distribution and purchase	●	●	●	●	●	●	●	●	●
installation and use	●	●	●	●	●	●	●	●	●
maintenance and upgrading	○	○	○	○	○	○	○	○	○
cycle: reuse (product/components)	●	●	●	●	●	●	●	●	●
cycle: recycling (materials)	●	●	●	●	●	●	●	●	●
cycle: disposal (incineration/landfill)	●	●	●	●	●	●	●	●	●

SHOELACES

Impact Matrix.

	resource depletion	global warming	ozone layer depletion	acid rain // acidification	solid waste	land degradation	water pollution	air pollution	reduced biodiversity
raw material extraction	●	●	●	●	●	●	●	●	●
material processing	●	●	●	●	●	●	●	●	●
component manufacturing	●	●	●	●	●	●	●	●	●
assembly and packaging	●	●	●	●	●	●	●	●	●
distribution and purchase	●	●	●	●	●	●	●	●	●
installation and use	○	○	○	○	○	○	○	○	○
maintenance and upgrading	●	●	●	●	●	●	●	●	●
cycle: reuse (product/components)	●	●	●	●	●	●	●	●	●
cycle: recycling (materials)	●	●	●	●	●	●	●	●	●
cycle: disposal (incineration/landfill)	●	●	●	●	●	●	●	●	●

Impact Matrix.

	resource depletion	global warming	ozone layer depletion	acid rain // acidification	solid waste	land degradation	water pollution	air pollution	reduced biodiversity
raw material extraction	●	●	●	●	●	●	●	●	●
material processing	●	●	●	●	●	●	●	●	●
component manufacturing	●	●	●	●	●	●	●	●	●
assembly and packaging	●	●	●	●	●	●	●	●	●
distribution and purchase	●	●	●	●	●	●	●	●	●
installation and use	●	●	●	●	●	●	●	●	●
maintenance and upgrading	○	○	○	○	○	○	○	○	○
cycle: reuse (product/components)	●	●	●	●	●	●	●	●	●
cycle: recycling (materials)	●	●	●	●	●	●	●	●	●
cycle: disposal (incineration/landfill)	●	●	●	●	●	●	●	●	●

Impact Matrix.

	resource depletion	global warming	ozone layer depletion	acid rain // acidification	solid waste	land degradation	water pollution	air pollution	reduced biodiversity
raw material extraction	●	●	●	●	●	●	●	●	●
material processing	●	●	●	●	●	●	●	●	●
component manufacturing	●	●	●	●	●	●	●	●	●
assembly and packaging	●	●	●	●	●	●	●	●	●
distribution and purchase	●	●	●	●	●	●	●	●	●
installation and use	●	●	●	●	●	●	●	●	●
maintenance and upgrading	○	○	○	○	○	○	○	○	○
cycle: reuse (product/components)	●	●	●	●	●	●	●	●	●
cycle: recycling (materials)	●	●	●	●	●	●	●	●	●
cycle: disposal (incineration/landfill)	●	●	●	●	●	●	●	●	●

Impact Matrix.

	resource depletion	global warming	ozone layer depletion	acid rain // acidification	solid waste	land degradation	water pollution	air pollution	reduced biodiversity
raw material extraction	●	●	●	●	●	●	●	●	●
material processing	●	●	●	●	●	●	●	●	●
component manufacturing	●	●	●	●	●	●	●	●	●
assembly and packaging	●	●	●	●	●	●	●	●	●
distribution and purchase	●	●	●	●	●	●	●	●	●
installation and use	●	●	●	●	●	●	●	●	●
maintenance and upgrading	○	○	○	○	○	○	○	○	○
cycle: reuse (product/components)	●	●	●	●	●	●	●	●	●
cycle: recycling (materials)	●	●	●	●	●	●	●	●	●
cycle: disposal (incineration/landfill)	●	●	●	●	●	●	●	●	●

Impact Matrix.

	resource depletion	global warming	ozone layer depletion	acid rain // acidification	solid waste	land degradation	water pollution	air pollution	reduced biodiversity
raw material extraction	●	●	●	●	●	●	●	●	●
material processing	●	●	●	●	●	●	●	●	●
component manufacturing	●	●	●	●	●	●	●	●	●
assembly and packaging	●	●	●	●	●	●	●	●	●
distribution and purchase	●	●	●	●	●	●	●	●	●
installation and use	●	●	●	●	●	●	●	●	●
maintenance and upgrading	●	●	●	●	●	●	●	●	●
cycle: reuse (product/components)	●	●	●	●	●	●	●	●	●
cycle: recycling (materials)	○	○	○	○	○	○	○	○	○
cycle: disposal (incineration/landfill)	●	●	●	●	●	●	●	●	●

Citations - Chat GPT

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