a sustainable, comfy, accessible mask to everyone
The rapid propagation of the deadly corona virus has killed millions throughout the world.

This has exponentially increased the demand for surgical masks.

Masks have been able to flatten the curve and have helped in saving lives.
Issues with Surgical Face Masks

The most common mask people wear are surgical masks even though they are not the most efficient in providing a complete, sealed cover against virus droplets.

Surgical masks are not very comfortable and hard to breathe in.

Many surgical masks are ending in the streets as litter.

However, surgical masks are one of the most affordable masks at the moment and are disposable, allowing the user to throw it out rather than having the user go through the hassle of washing and cleaning their mask.
# Face Mask SWOT Analysis

<table>
<thead>
<tr>
<th><strong>S</strong></th>
<th><strong>Strengths</strong></th>
<th><strong>W</strong></th>
<th><strong>Weaknesses</strong></th>
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<tbody>
<tr>
<td></td>
<td>Worldwide pandemic: masks are being effective in reducing the spread of COVID 19</td>
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<td>Environment: most masks are disposable meaning they are not durable and will end up in the trash or as litter in the streets after one use</td>
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<td>Health: provide protection from dangerous airborne particles</td>
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<table>
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<tr>
<th><strong>O</strong></th>
<th><strong>Opportunities</strong></th>
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<th><strong>Threats</strong></th>
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<tbody>
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<td></td>
<td>Everyday life: masks are a part of our everyday life, therefore there are opportunities in making durable and user friendly masks</td>
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<td>Mask use: a new user-friendly mask does not guarantee everyone will want to wear it</td>
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<td></td>
<td>Environment: how sustainable will the new mask be</td>
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Opportunity Matrix

Price (High)

Simple

Complex

Price (Low)
Persona

Young Hispanic couple in their late 20’s
Wife works as a teller at a bank
Husband works as an architect
Both love to exercise during the morning together and get a coffee after
They hate having to switch sweaty masks after their run and keep on buying disposable surgical masks for work
They want something at an affordable price range that will protect them from COVID yet allow them to carry on with their daily lives
Current Concepts

Clear mask concepts with replaceable filters
Mood Board
Journey Map

Millennial goes on jog at the park with her running mask

She then goes to Starbucks and gets her coffee, with a mask

She goes to work at a firm as a receptionist dealing with people face to face, wears a different mask

After work, she goes grocery shopping using her work mask
Reference Object

Half respirator from Amazon
Breakdown

- EPDM Rubber
- HDPE
- ABS
- Silicone
- PM 2.5 filter
  - Spun bound fibers
  - Melt blown fibers
  - Activated carbon fibers
- Polycarbonate
- Silicone
- Cotton rubber elastic
**Materials**

**Half Respirator**
- HDPE
- EPDM
- ABS
- Silicone
- Cotton

**Packaging**
- Paper
- LDPE
- Bleached Solidboard

**futrmask**
- Polycarbonate, close production
- Silicone, closed production
- Natural Rubber
- Hemp textile
- HDPE, closed production

**Packaging**
- Kraft Paper
- Bamboo
- Trebodur
Okala Factor Points

Half Respirator: \(0.000119\)
futrmask: \(0.0000514\)

Both based on a lifetime of 5 years and a total usage of 3000 hours

Same type of transportation: average 16t truck

Goal
50% reduction
\(0.0000595\)
Final Design
Coated clear polycarbonate mask that allows people to observe each other's emotions without fogging up.

Silicone lining to provide comfort and a sealed coverage from surrounding particles.

Sustainable hemp textile for the straps.
Threaded HDPE filter housing connected to the polycarbonate mask mold.

Natural rubber gasket ensures an enclosed area where the threaded components meet.

Bamboo fleece and N95 filters are housed in the compartment.

Threaded HDPE filter housing connected to the polycarbonate mask mold.
A silicone flap attached to a separate piece of polycarbonate allows the user to open up the mask to eat or drink without removing the entire mask.

A rubber lattice structure is attached through a hole in the mask and provides extra flexibility for the straps.
Packaging

Bamboo pulp box encloses all packing material, mask, and components.

Cylindrical bamboo case for mask storage.

Treborad used as packing material enclosing the mask, bamboo case, and components.
thank you
futrmask