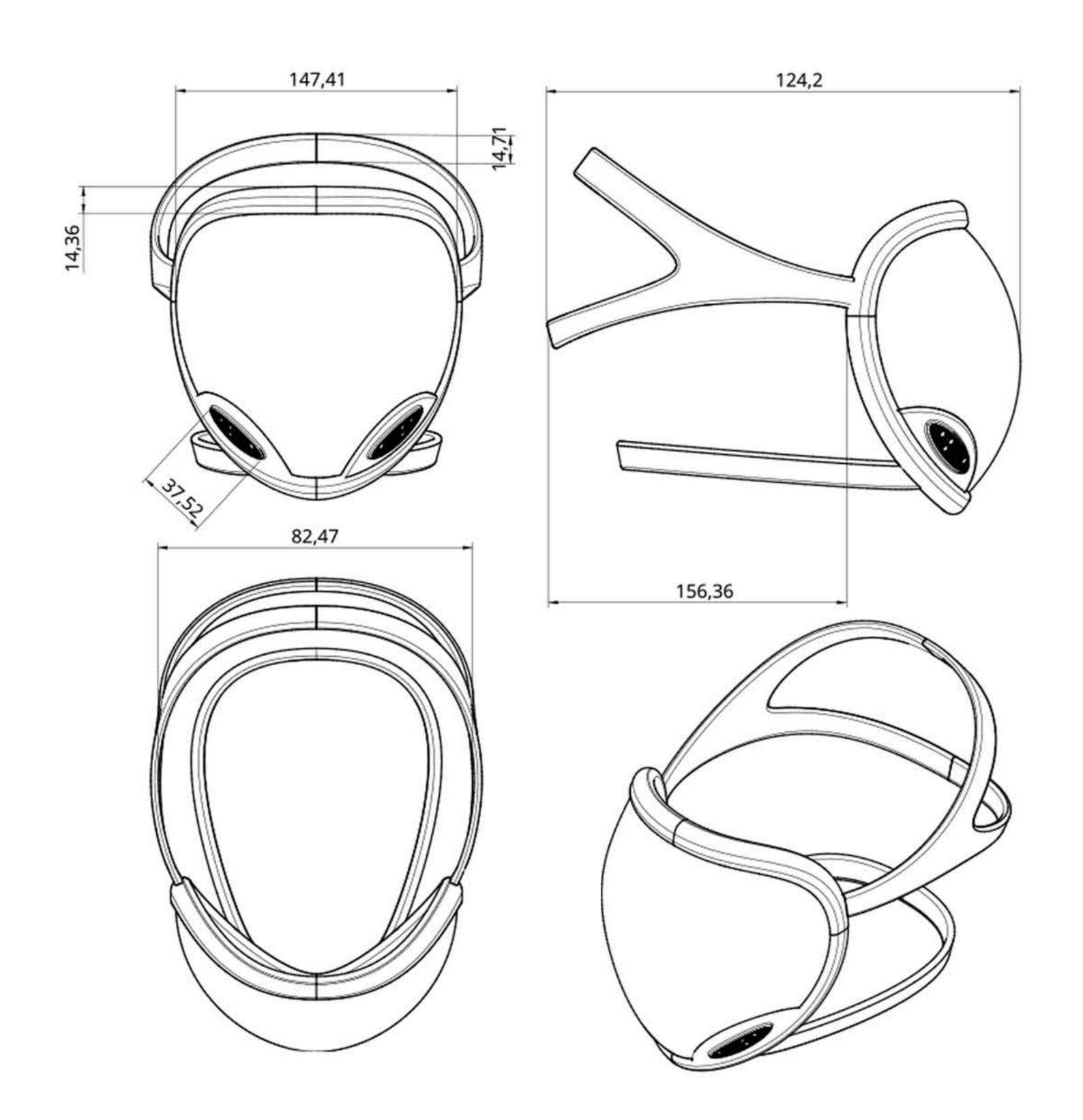


BWP-Mask

By Jannis Heinzmann

The better world project challenged me to make a product to help the world, and the pandemic has provided me with a great opportunity. My solution has been a mask that is affordable but also safer then other alternatives such as fabric masks. Due to the ease of production this can be made more efficiently and affordably.



The Mask Had To Fit 5 Criteria

- 1. The mask has to be reusable to cut down on waste
- 2. The mask should be safer than other marks
- 3. Should be usable for a wide variety of users
- 4. Should be easy to breathe with
- 5. The mask should be affordable

The mask would be made from soft silicone for the head and neck straps and the rim would be made out of regular silicon. The filter will be synthetic polymer fibres, the same as N95 masks.

BWP-Mask

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Framing the Question (Brief)

Anything we can do to minimize the waste to our environment is a step in the right direction to extend the time we have to fix our environmental problems, right now with the pandemic, we are going through more single-use masks then ever and this can have a major problem for our seas and how much waste is in them. I will be tasked to make a reusable mask that can both cut down on the single-use masks and a mask that is primarily used in health care clinics.

This mask will have to insure 5 important things to complete the task.

- The mask has to be reusable to cut down on waste
- The mask should be as safe or safer than other reusable or single-use masks on the market today.
- Should be usable for a wide variety of users, if this requires different sizes that's fine.
- Should be easy to breathe with and does not put a strain on the user's lungs.
- The mask should also be affordable and not an eyesore

I will be also hoping to make the mask affordable and easy to use for all. I also hope that I won't be an eyesore for other people so that customers can feel confident wearing the mask. The mask should also be made from primarily hard and soft plastic and available for all ages. Hard plastic should be used if needed and the soft plastic should be used to seal around the skin to ensure a tight seal. The mask most importantly should be as or safer than already existing products. This is all in the aim to cut down on the number of masks that make their way to landfill or even worse the ocean.

What my client wants

My client for this assignment will be my dad, he is someone that is interested in wearing a mask more commonly and wants the following things from this mask. He currently wears a mask rarely and only uses it in highly populated places, he is also a woodworker so this mask could work as a more industrial mask would be great as well.

His wants are

- He wants the mask to look more aesthetically pleasing than the mask that already exists. He said this could be done by making the mask more inventive or "cool".
- He also wants the mask to be washable in one way or another to make sure that the user can clean off the virus.
- He also wants the mask to be comfortable so that he could wear it for a whole day and does not cause a burden on the user.

Research

FACE COVERS



Overview of the product

The mask made by Adidas is a reusable fabric mask, the mask is made with 2 layers of fabric. The mask will be sold worldwide. The mask is sold in 3 packs and is made from 93% Recycled polyester and 7% elastane. The mask is designed to be a tight fit around the mouth to ensure a safe seel. And the product is \$12 for 3 masks making it relatively affordable.

Whos it for

The mask is most commonly being marketed to people who have an active life and need a mask that doesn't get in the way of that, the material also helps with this by making the mask soft and easily breathable.

Investigating materials and functional requirements

The face mask is sold in 3 packs and fits Mid to large, this will fit most adults. The mask is made of 93% Recycled polyester and 7% elastane making it comfortable to have on your face, this also allows it to be washable and in turn reusable. The fabric is a tight fit and breathable, This ensures the user can have healthy habits every day.

THE SOCIAL GAS MASK



Overview of the product

This is the social gas mask, made for emergency situations but is made in a way to seem scary and ugly, its a friendly face mask. Made in 2014 by Yanko Design. This is, of course, a unique design made of very particular situations but can be a great help in a health crisis like Ebola or of course COVID-19.

Whos it for

The mask would not be used day to day and would only be used in an emergency like heath cresses. The mask could be used by health professionals that need to be protected by don't wanting to alienate their patients. It could also be used by people that are in places where the air is not safe to breathe in whether that is pollution or viruses.

Investigating materials and functional requirements

There is no information on the material of the mask but I can make an estimation of the material. It looks like mostly plastic where the mouth and nose piece are but the most likely glass was the eyes are covered. The mask would also consist of an air filter under the mouthpiece.

Final Evaluation

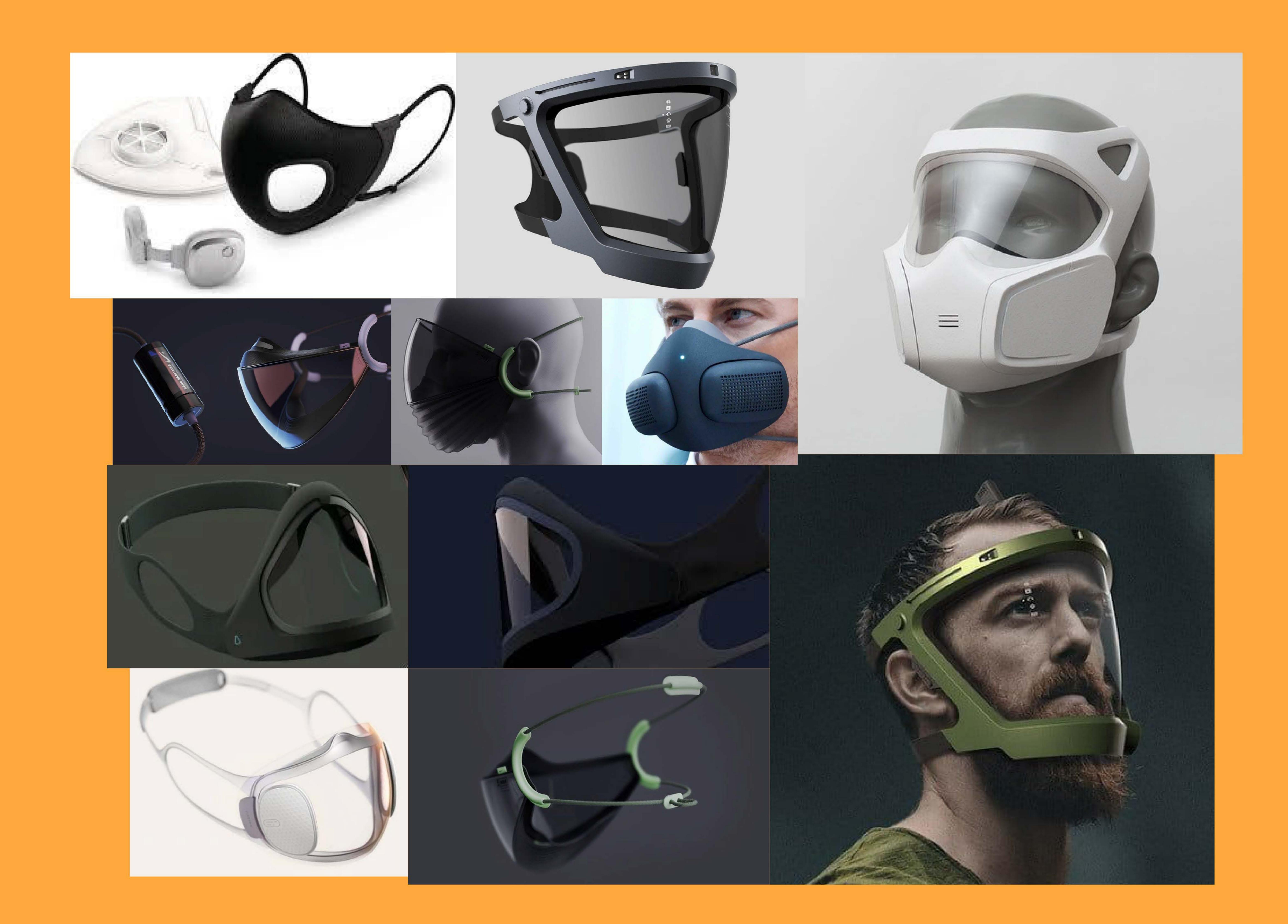
The better world project is an assessment that pushes me to make a design solution that will change the world for the better, and during 2020 the Coronavirus has given me a great opportunity to design a mask that could help the world for the better. I worked alongside my dad who wanted a mask that was safe and reusable. I think I've made something that is safer than their mouth covering masks and is relatively cheap. Because it would be easy to manufacture from plastic using injection moulding, compared to fabric-based masks, where it is hard to work with fabric. And it is safer because it covers the eyes as well, and has a soft plastic rim that forms a seal around the user's face.

From the beginning, I wanted to make a product that cuts down on waste and in 2020 we were going through our fair share of single-use masks and thought it would be great to make a reusable mask that is also safer than single-use masks to make them even more viable for users. I also was sure to make it suitable for my clients need and think that I ticked all 3 boxes on the look, cleanability (in the dishwasher) and comfort. I learnt a lot from the 2 research reports and decided a plastic design is best and then when I moved to my concepts I decided on the whole face covering to make it safer.

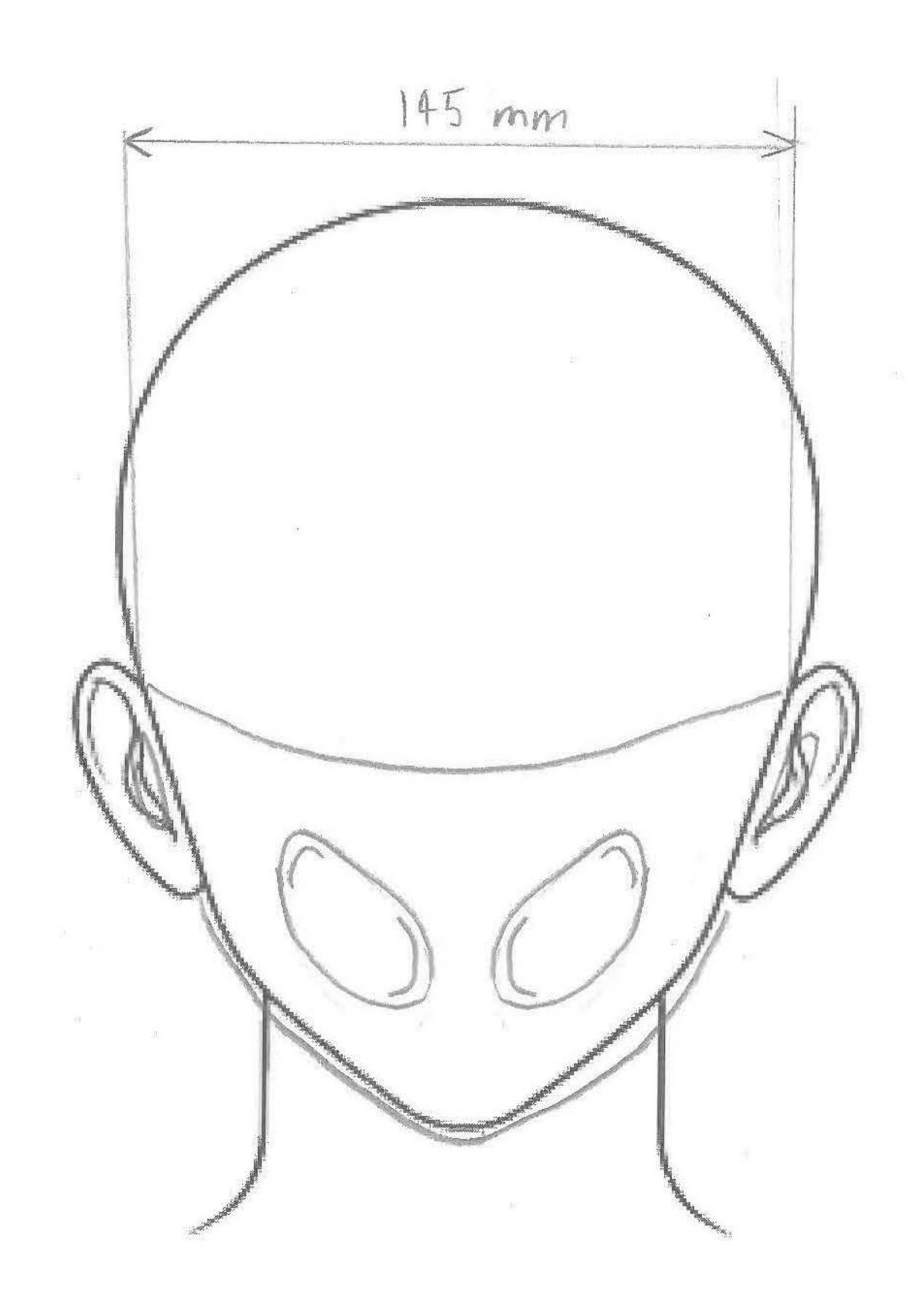
I think over the time of this project I was driven to make a product that would fit the brief to help a wide range of people whether pour, rich, big or small. I believe that I have accomplished this in 2 main ways by cutting down on waste and by making a product that could save lives. I learnt a lot about how to model something with organic shapes and learnt a lot about masks and what makes them safe and unsafe. I didn't like how broad the assignment was and how it didn't feel planned whatsoever and I don't like onshape, But I did like the freedom.

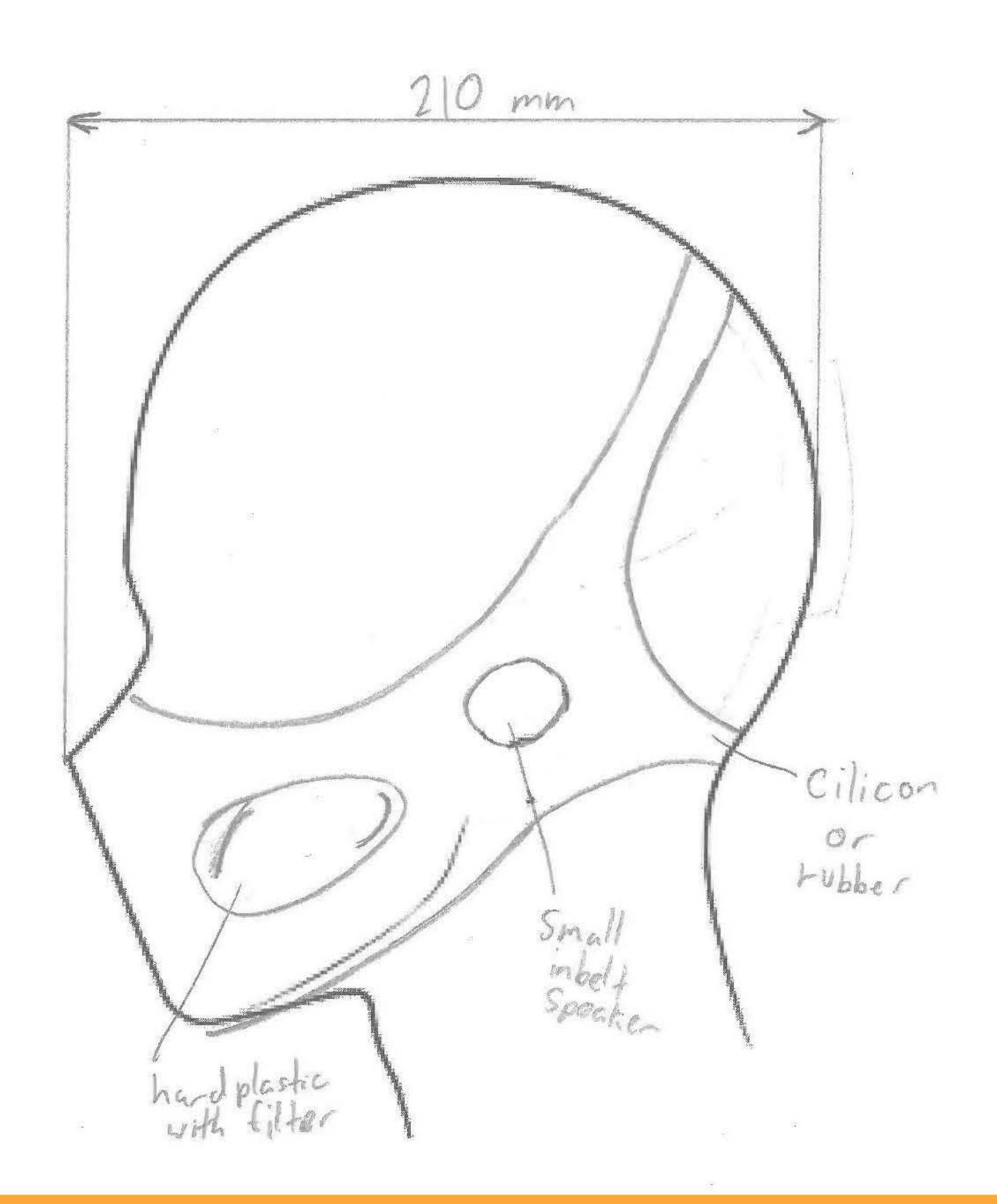
The better world project challenged me to make a product to help the world, and the pandemic has provided me with a great opportunity. My solution has been a mask that is adorable but also safer then other alternatives such as fabric masks. Due to the ease of production this can be made more efficiently and affordably.

The mask would be made from soft silicone for the head and neck straps and the rim would be made out of regular silicon. The filter will be synthetic polymer fibres, the same as N95 masks.



Concept Two
This mask is a more everyday mask that has a smaller profile featuring a small speaker on the ears to give it a more madden feel. It will be made out of soft plastic that fits tight around the face with 2 filters.







Concept one

This mask is a more industrial take on a mask making it more Harvey and durable. It is made primarily from silicone with a glass front and a large filter along the sides. It also has 2 straps that are elastic to have a snug fit.

