

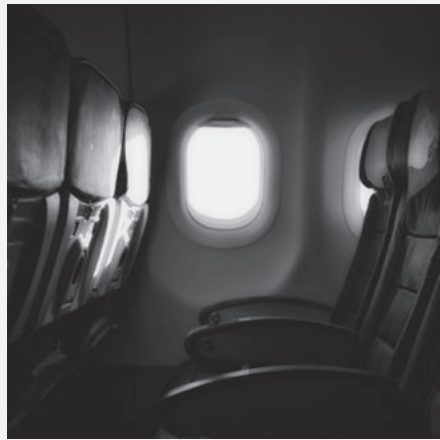


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AIRBORNE

DEGREE PROJECT FOR MASTER OF FINE ARTS IN INDUSTRIAL DESIGN

2014



Radically increased mobility among humans, our treatment of animals and climate changes have increased the frequency of epidemics and the probability that a novel or mutated virus can spread rapidly.

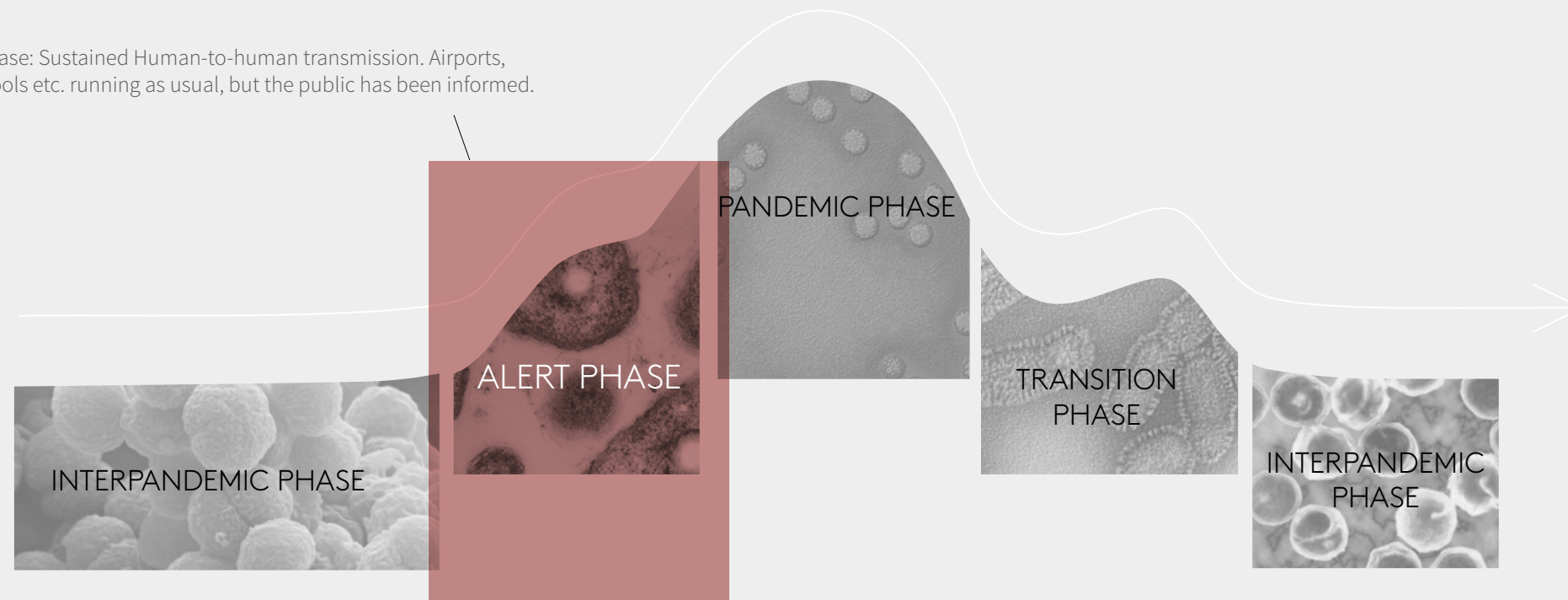


PROTECTION GEAR AGAINST AIRBORNE DISEASES. A disease is classified as airborne when pathogens are able to be transmitted from one person to another through the air. The ways of transmission can occur through inhaling contaminated aerosols, by close contact or by touching your own face and eyes. The latter being something which has been overlooked in most respirators.



The biggest threats are in the confined and crowded spaces. These places with a higher risk of transmission are those where casual exposure to an infected individual can easily occur, such as when sitting close together in an airplane, waiting room or sharing a taxi. We touch our faces several hundreds times a day. Touching the mucous membranes of the nose, mouth and eyes is a possibility for transmission and acquisition of a range of infections.

When? Alert phase: Sustained Human-to-human transmission. Airports, Hospitals, Schools etc. running as usual, but the public has been informed.



BRIEF

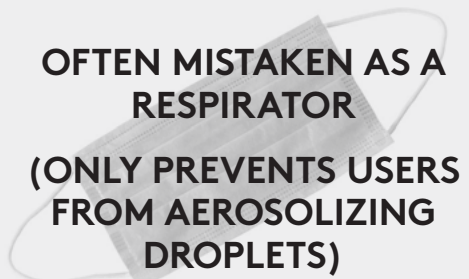
Delaying the entry of a virus into the population by protecting those who work with a higher risk of exposure and transmission, which is specially important during a pandemic alert phase. How? By using existing materials and technologies the aim is to improve the efficiency and lessen the risks which today's respirators has. A main focus on the emotional response, leakage, face touching and communication.

TARGET

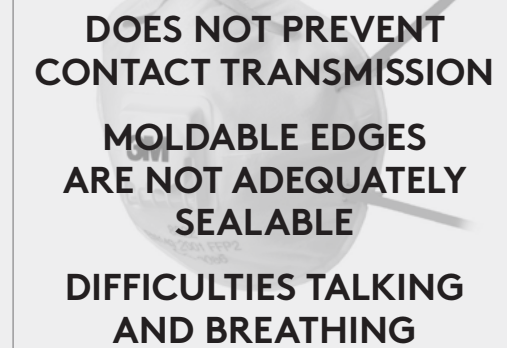


HOSPITAL & CLINICAL STAFF
MEDICAL OUTREACH SERVICE
FLIGHT CREW MEMBERS
PUBLIC SECTOR, E.G. TEACHERS
VERY FREQUENT TRAVELERS

PROBLEMS



**OFTEN MISTAKEN AS A
RESPIRATOR**
**(ONLY PREVENTS USERS
FROM AEROSOLIZING
DROPLETS)**



**DOES NOT PREVENT
CONTACT TRANSMISSION**
**MOLDABLE EDGES
ARE NOT ADEQUATELY
SEALABLE**
**DIFFICULTIES TALKING
AND BREATHING**

**ONLY FULL FACE PROTECTS AGAINST ALL THREE WAYS
OF TRANSMISSION, HOWEVER VERY SENSITIVE TO FIT**



NEEDS TO BE FIT TESTED
DIFFICULTIES TALKING & BREATHING.
UNCOMFORTABLE
AGGRESSIVE AESTHETICS

The intended target group are individuals, who are exposed to many others while working in a confined space due to their profession. Fatigue and stress in these professions also effects their immune system's ability to fight off diseases. These individuals can then become a danger to others if they should become infectious themselves.

GOALS

COMPLETELY SEALED EDGES BY ADHESIVE
STRETCHABLE SILICONE

FACILITATE COMMUNICATION BY NOT
OBSTRUCTING THE MOUTH

FULL FACEPIECE WITH SEPARATE EYE SECTION

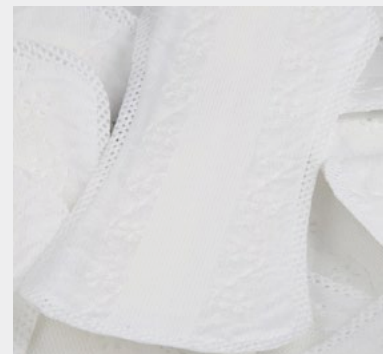
MOUTH SECTIONS COATED WITH ANTI-FOG
AGENT

DISPOSABLE FILTER

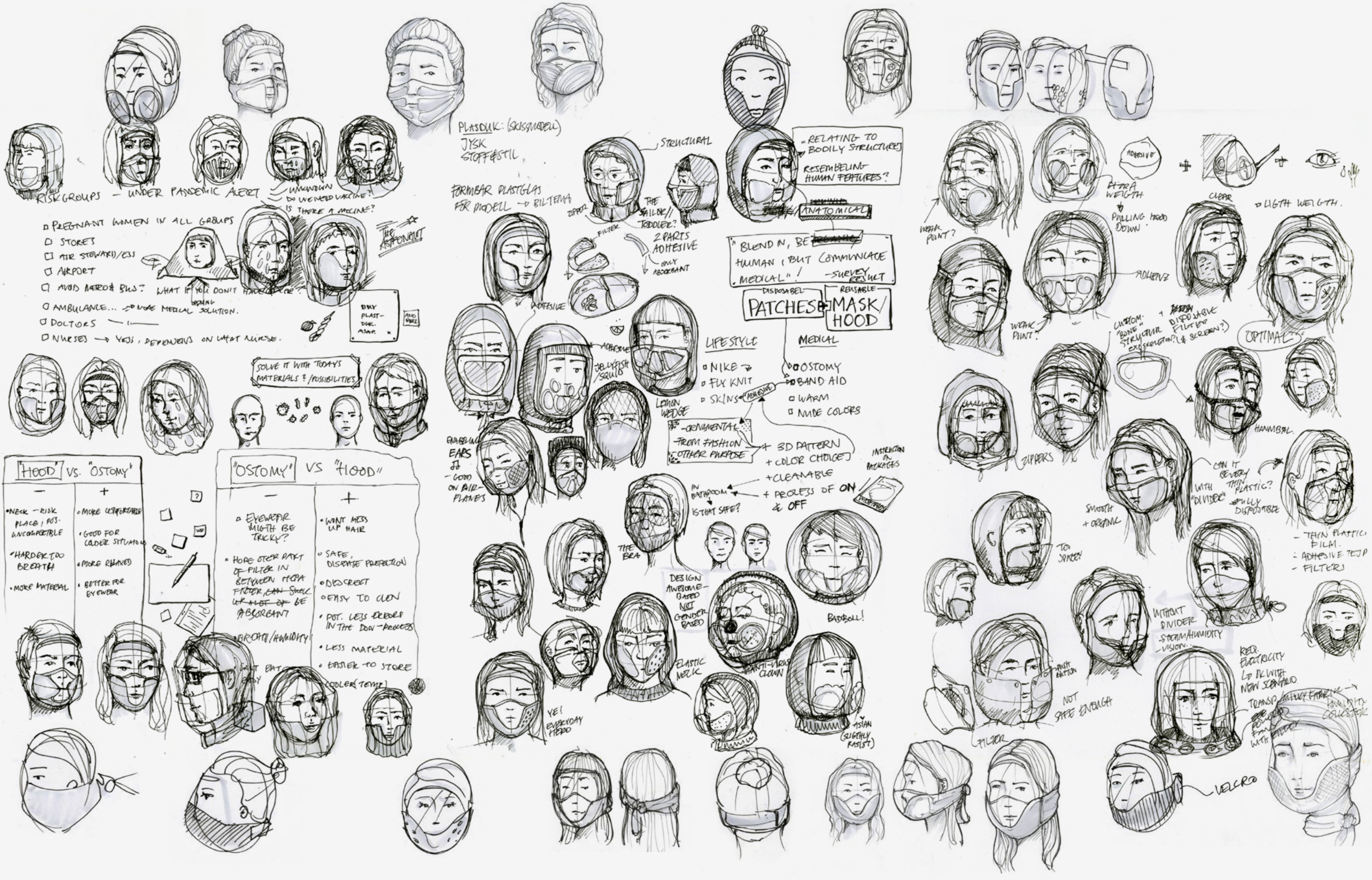
REUSABLE MASK WITH A LIMITED LIFE CYCLE

INVOKE A ROUTINE OF DISINFECTION AND
HAND-HYGIENE DURING DONNING & DOFFING

SECTIONING THE MASK AND THE USE OF
STRETCHABLE SILICONE WILL MAKE IT ADJUST
TO THE MOVEMENT OF THE JAW



The novelty of the conceptual respirator came from medical products such as colostomy bags and their adhesive and stretchy silicone. Also because colostomy bags is a product the user is dependent on and it is worn on the body every hour and every day. Thin visors, layered products, bandages, other adhesive silicone products and the handling and hygiene of contact lenses were all great sources of inspiration.



- RISK GROUPS - UNDER PANDEMIC ALERT
- PREGNANT WOMEN IN ALL GROUPS
 - STORES
 - AIR STATIONS/ES
 - AIRPORT
 - AVOID AIRCRAFT BUS? WHAT IF YOU DON'T HAVE A CAR?
 - AMBULANCE... → MORE MEDICAL SOLUTION.
 - DOCTORS
 - NURSES → YES, DEPENDS ON WHAT NURSE.
- UNKNOWAN DO WE NEED VACCINE? IS THERE A MACHINE?
- THE RESPONSIBLE
- ONLY PLAST-DIAG-ARM

PLASTIK (SKINMODEL)
 JYSK STOFFSTIL

FORMER PLASTGLAS
 FOR MODEL → BILTERNA

STRUCTURAL

RELATING TO BODY STRUCTURES
 RESEMBLING HUMAN FEATURES?

ANATOMICAL

"BLEND IN, BE HUMAN (BUT COMMUNICATE MEDICAL)"

DISPOSABLE REUSABLE
PATCHES MASK HOOD

ADHESIVE

2 PARTS ADHESIVE

ONLY ABSORBANT

FILTER

ZIPPER

THE SILLON/REDOLEZ?

ADHESIVE

JELLYFISH SQUID

LION'S WEDGE

LIFE STYLE

MEDICAL

NIKE →

FLY KNIT

SKINS → FASHION

OSTOMY

BAND AID

WARM

MUDE COLORS

ORNAIMENTAL

FROM FASHION

OTHER PURPOSE

3D PATTERN

COLOR CHOICE

CLEANABLE

PROCESS OF ON & OFF

IN BATHROOM

IS THAT SAFE?

DESIGN ANSWER-BASED NOT GENERAL BASED

THE BEA

BASEBALL!

ELASTIC NETIC

WASH (SLIGHTLY RASIST)

YES! EVERYDAY HERO

SMOOTH + ORIGINAL

TOO STIFF

NOT STIFF ENOUGH

FILTER

WITHOUT SNIFFER

SPEAK HUMANITY - VISION

RED. ELECTRICITY

LEAD WITH NEW SCHEMATA

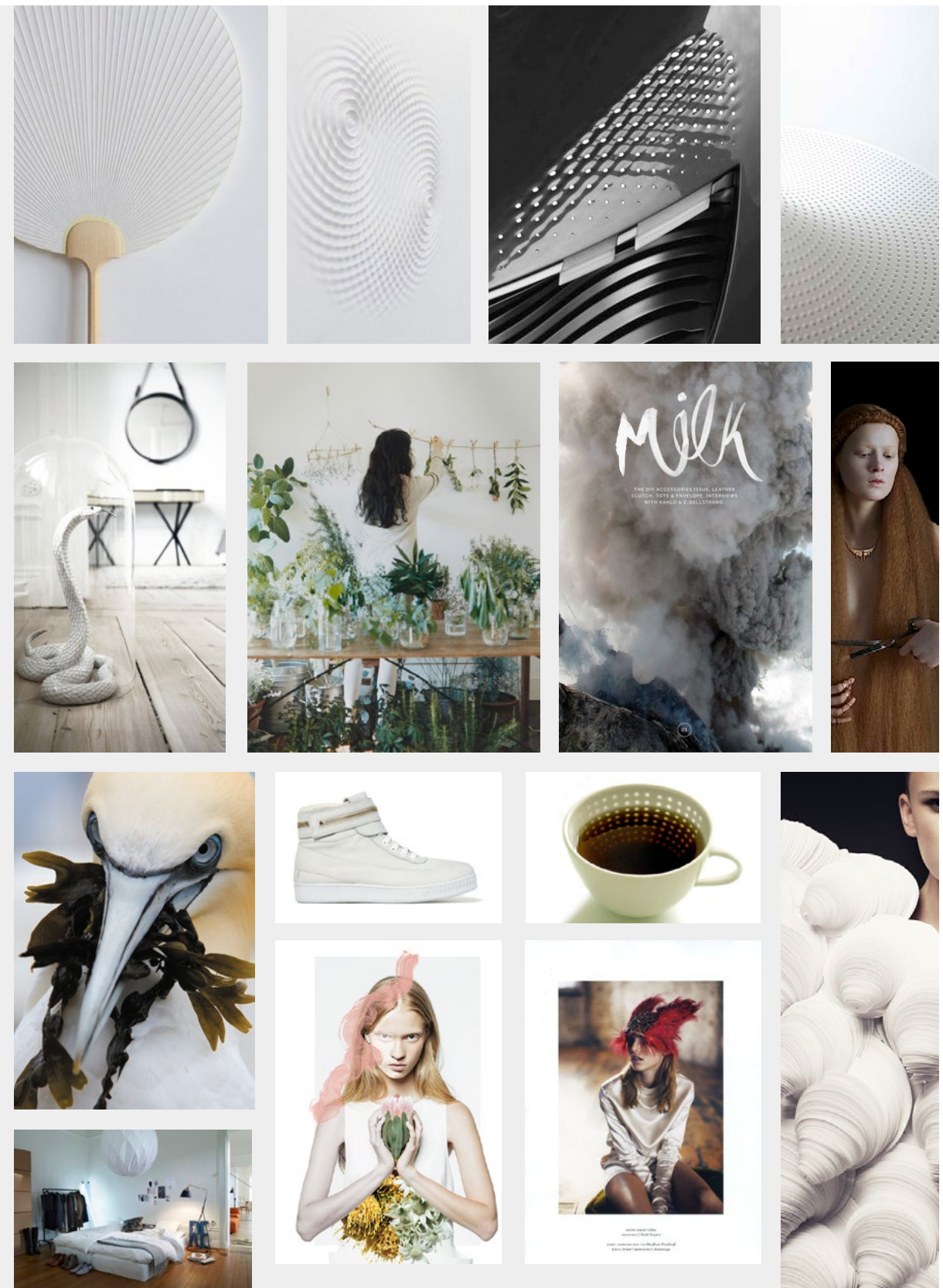
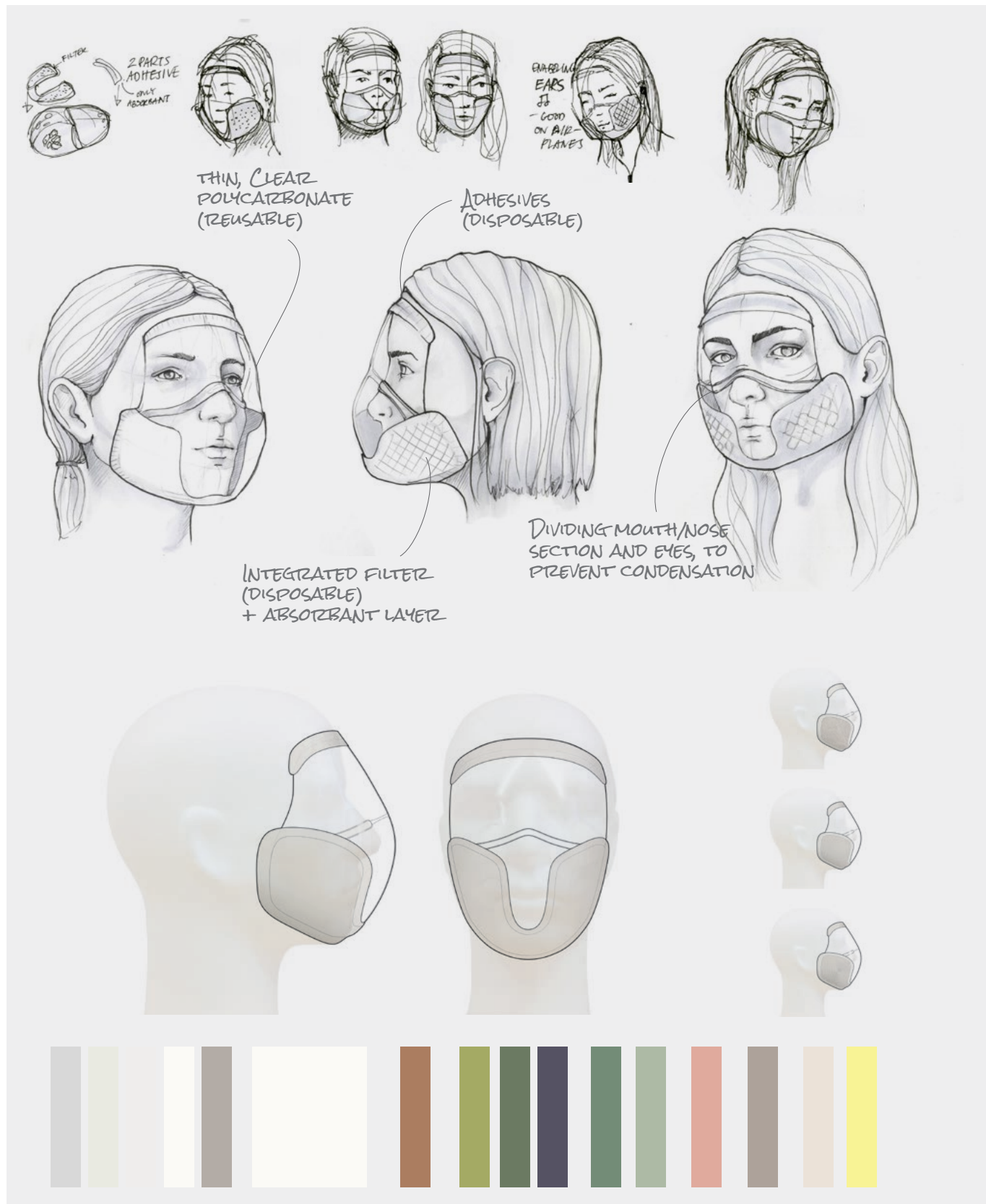
TRANSP. HONEY COMB

FOR FILTER WITH PAPER

VELCRO

HOOD vs. OSTOMY	
-	+
• NECK - RISK PLACE / POS. UNCOMFORTABLE	• MORE COMFORTABLE
• HARD TO DO BREATH	• GOOD FOR COLDER SITUATION
• MORE MATERIAL	• MORE FLEXIBLE
	• BETTER FOR EYEWEAR

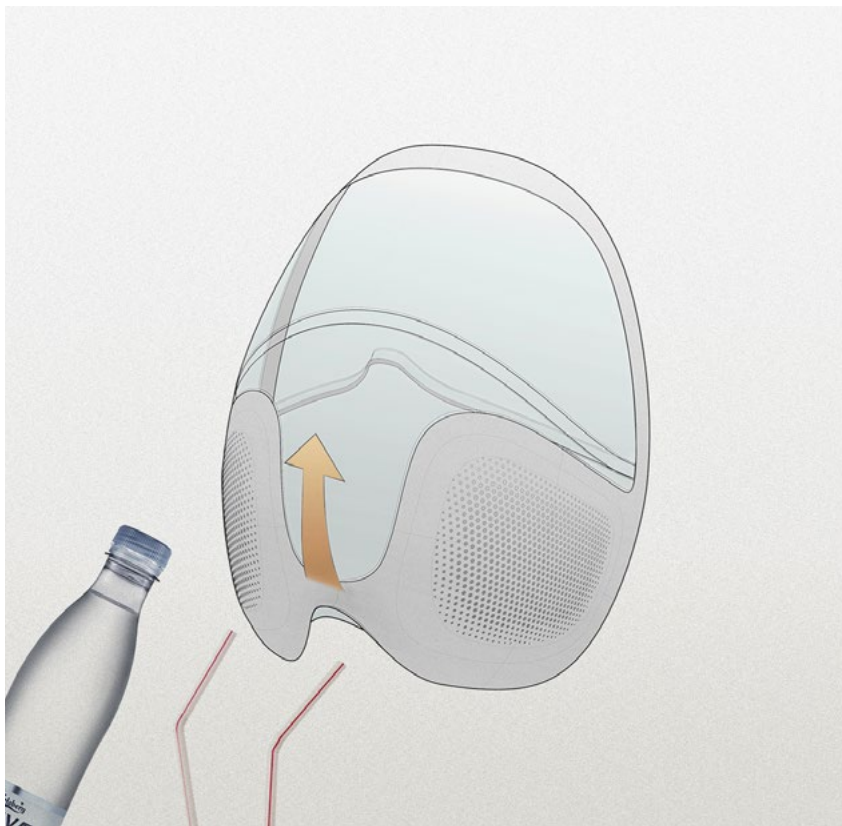
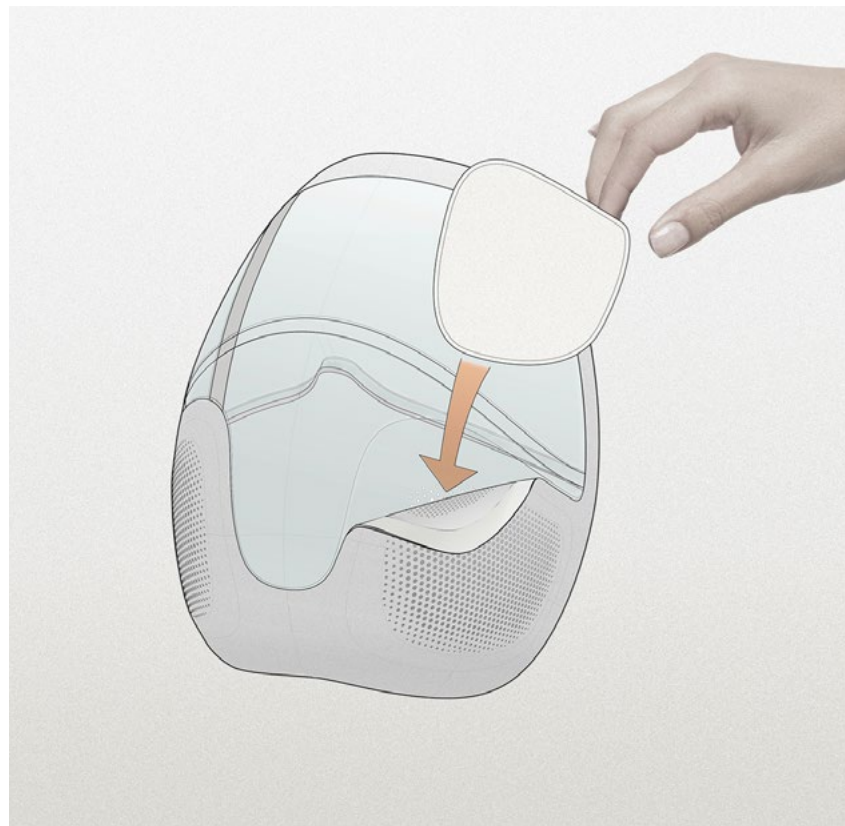
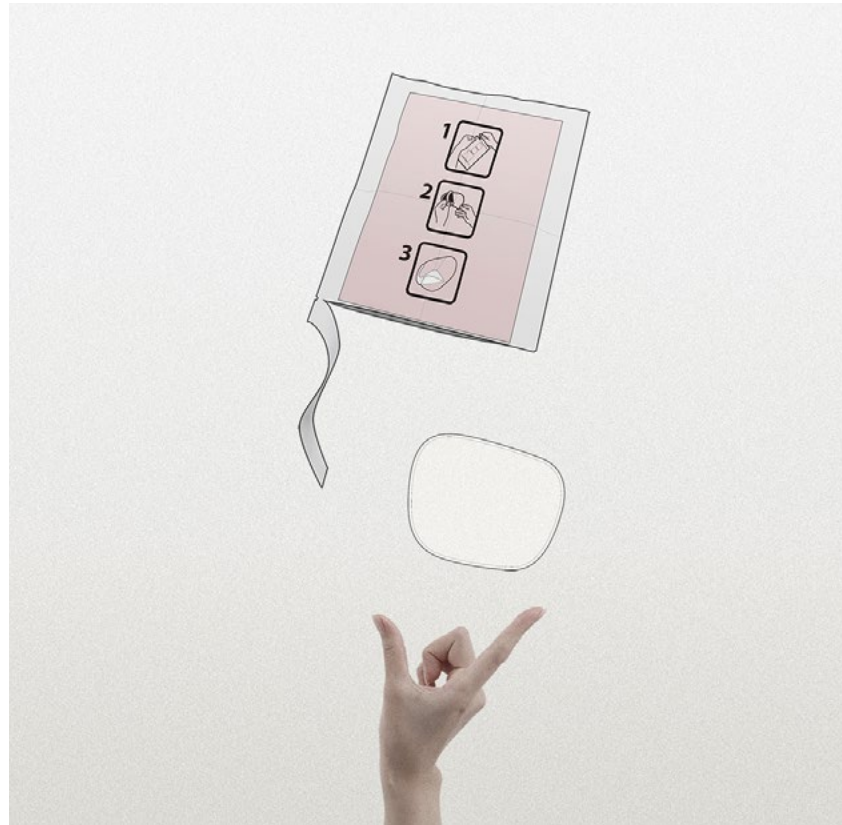
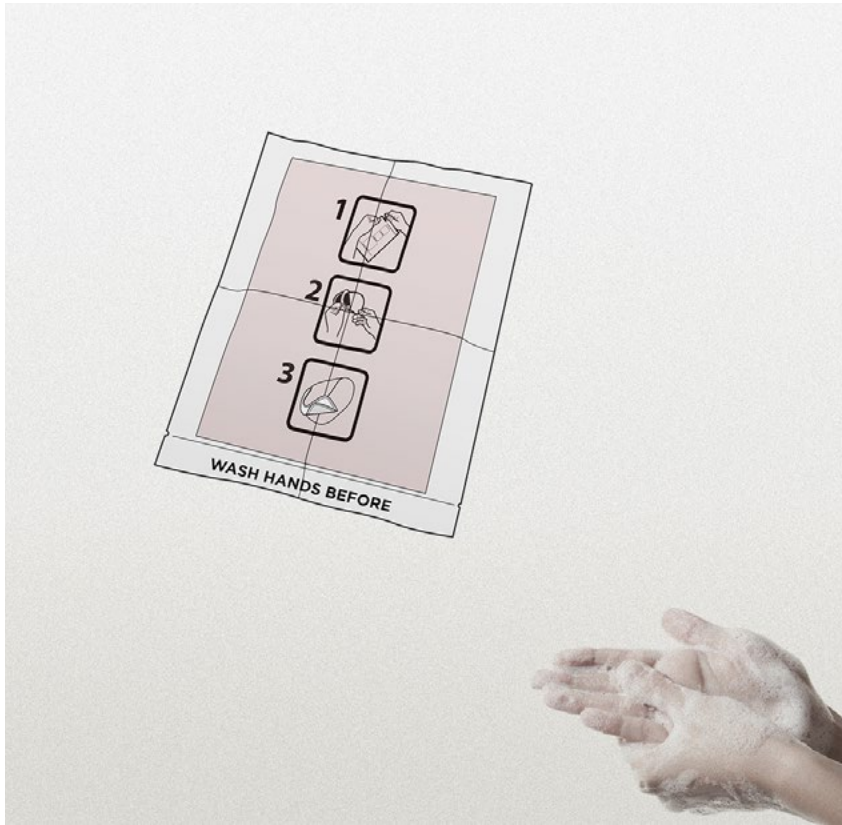
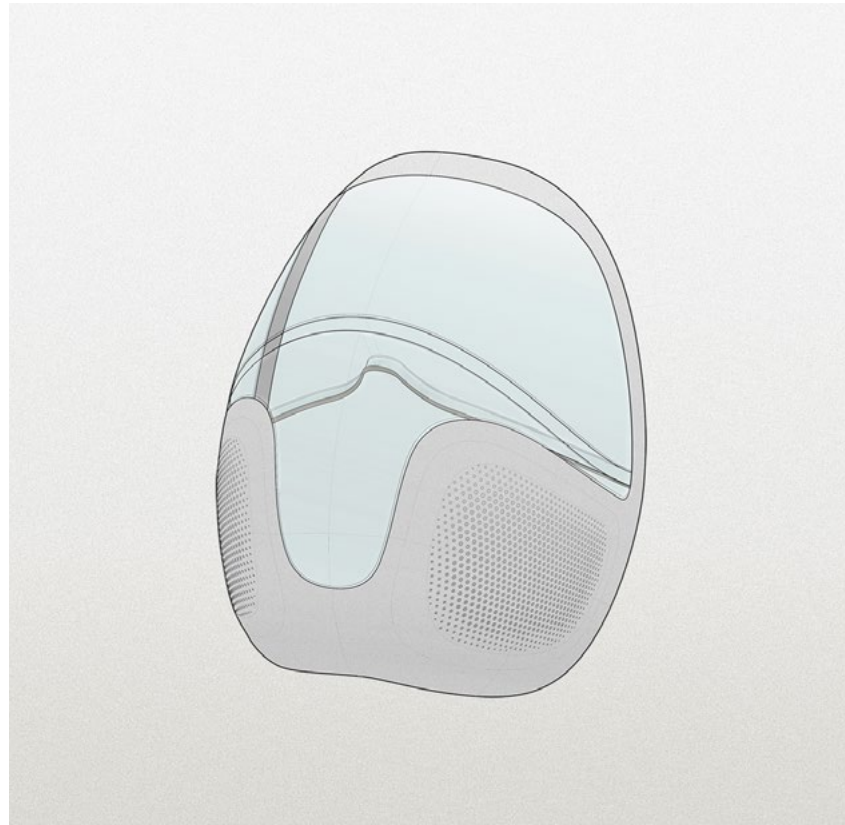
OSTOMY vs. HOOD	
-	+
• EYEWEAR MIGHT BE TRICKY?	• WON'T MESS UP HAIR
• MORE OTHER RISK OF FILTER IN BETWEEN PROPA FROM EAR SHALL LET A LOT OF BE ABSORBANT	• SAFE, DISEASE PROTECTION
	• DISCREET
	• EASY TO CLEAN
	• POT. LESS CREDS IN THE DON-PROCESS
	• LESS MATERIAL
	• EASIER TO STORE
	• COOLER TEMP.



SAMPLE - CONCEPT AND THEME



The reusable and full facepiece respirator with disposable filters prevents the three ways of transmission: inhalation of aerosols, droplet and contact. It consists of a light plastic visor which is combined with adhesive and stretchy silicone. The soft and gentle adhesive edges makes it more effective and safe than disposable respirators by completely sealing the edges to the face.



ALTERNATIVELY A FULLY DISPOSABLE MASK WITH SEALED IN FILTERS AND SUPERABSORBANT LAYERS - AN ASSESSMENT OF COST AND MATERIAL WASTE IS NEEDED.

HOWEVER SUCH A SOLUTION COULD BE MORE USER FRIENDLY AND SAFER.

Adhesive silicone is reattachable and reusable. This also prohibits casual and easy donning and doffing, which is associated with a higher risk of user error and contracting diseases. This user scenario instead requires the use of a mirror and sink and the donning and doffing therefor encourages a ritual of adequate hygiene of both hands and respirator.





