

Zefiro - Technology and Innovation against Covid-19

*Original*

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# WORLD HERITAGE and DESIGN for HEALTH

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World Heritage and Design for Health  
XIX INTERNATIONAL FORUM  
NAPLES 17 - CAPRI 18 | 19 JUNE 2021

## Le Vie dei Mercanti XIX INTERNATIONAL FORUM

Naples 17 - Capri 18 | 19 June 2021



### Zefiro

Technology and Innovation against Covid-19



#### Concept: the electro-ventilated mask

Zefiro is an electro-ventilated mask made up of **custom designed elements** and other **widely-available components**.

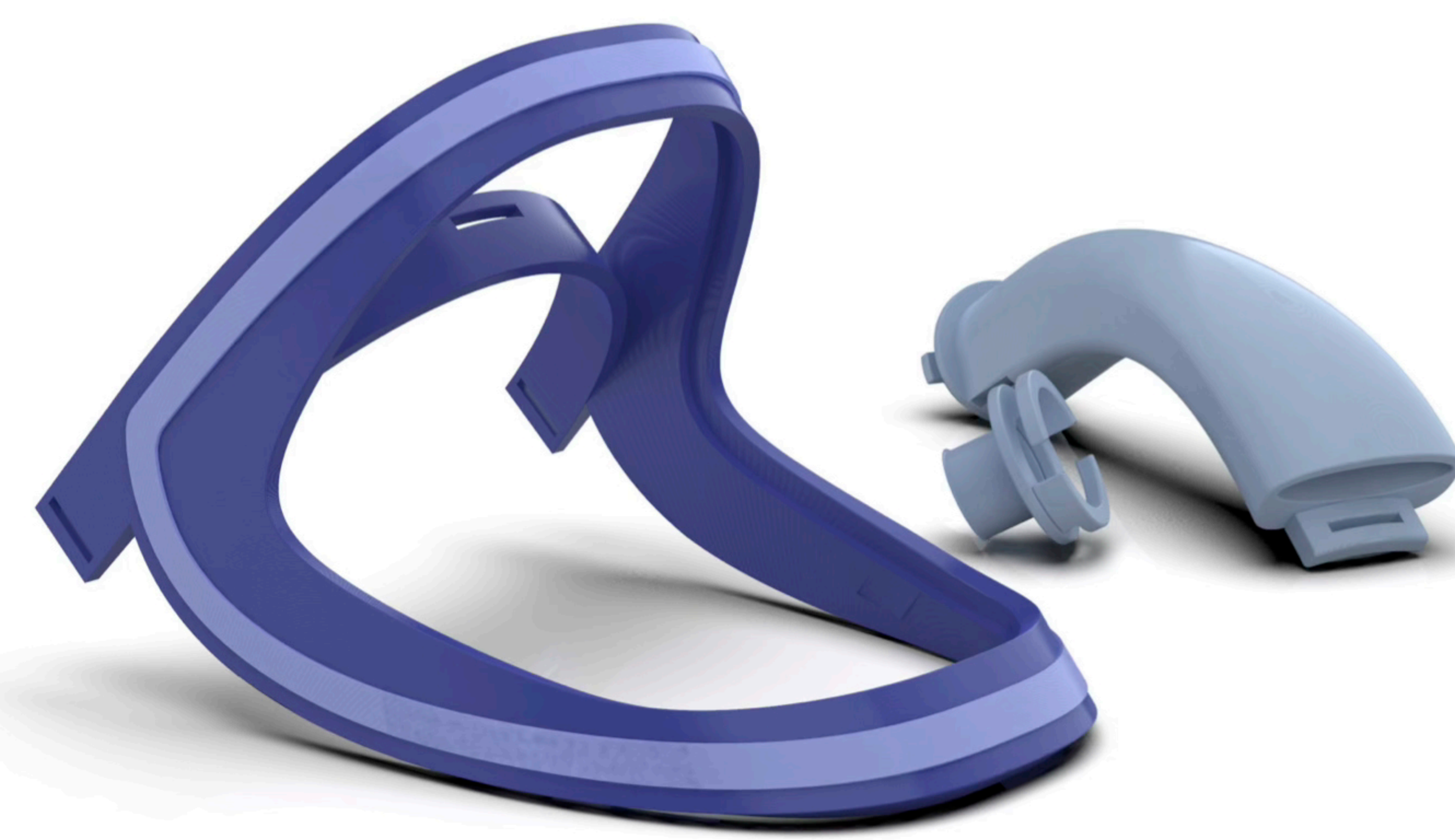
Specifically, the **frame** has been designed as structural element that ensures the correct positioning of the mask.

The other **standard components** perform the functions of isolation and individual protection, as well as introducing air into the mask.

#open source

#co-design

#sustainable development



#### Project guidelines

- Sanitizable
- Resistant
- Scalable
- Comfortable
- Less components

### Project

#### The functional groups

##### INDIVIDUAL INSULATION AND PROTECTION SYSTEM

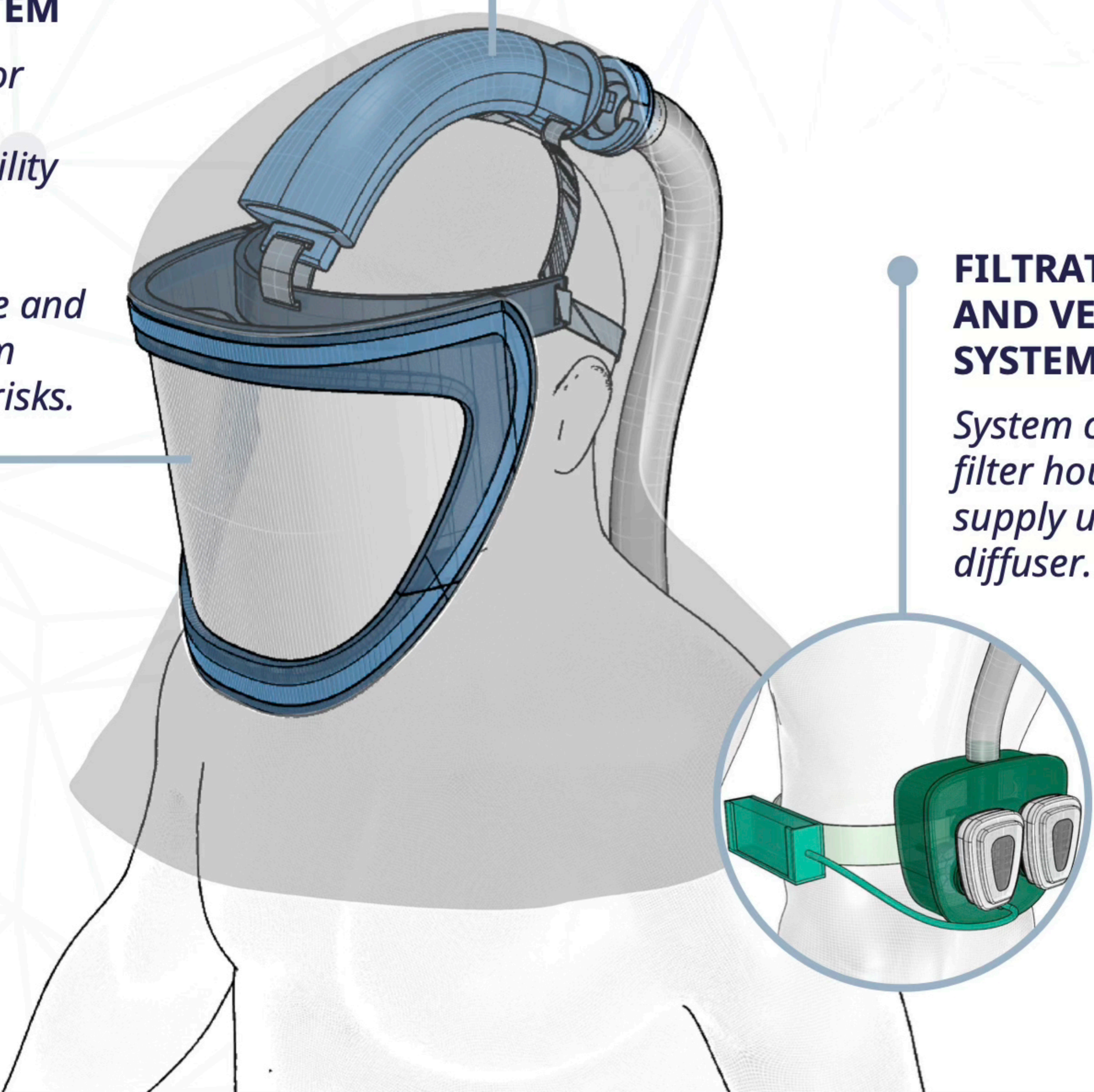
The transparent visor guarantees both protection and visibility to the operator. The insulating fabric surrounds the frame and shields the user from external contagion risks.

##### FRAME SYSTEM

Structural element of the mask, consisting of a front band, an upper plate and a spacer frame for the visor.

##### FILTRATION AND VENTILATION SYSTEM

System consisting of filter housing, fan, power supply unit, air pipe and diffuser.



### Exploded view

#### Mask system

#### Air system



#### The designed components



**FRAME**  
To fix the fabric and ensure the correct distance from the face.

**DIFFUSER**  
For a directed and comfortable air flow.

**CONNECTOR**  
To hermetically connect the two pipes.

**SUPPORTS**  
To provide support and stability to the operator.

**BOX**  
For power supply and air filtering.



### This is us

Zefiro was born from the collaboration of a multidisciplinary team, composed of **Designers**, with different areas of specialization, and **Engineers**, who decided to join their forces to face one of the many challenges that emerged during the initial moments of the Covid-19 pandemic.

**Supervisors:**  
F. Valpreda, F. Alessio, A. Dentis



**Designers, Engineers and Makers:** A. Auliso, S. Bellisario, D. Bortolotti, E. V. Bruno, A. Campanella, F. Cappa, F. Citarda, M. Gargiulo Pozzo, D. Mercenati, R. Montarolo, F. Rovera

