



Press Release

14th April 2020

A full-face snorkeling mask customized to protect resuscitation unit staff when conducting critical actions on patients with or suspected of having the COVID-19, ready to be rolled out in large quantities at a national scale

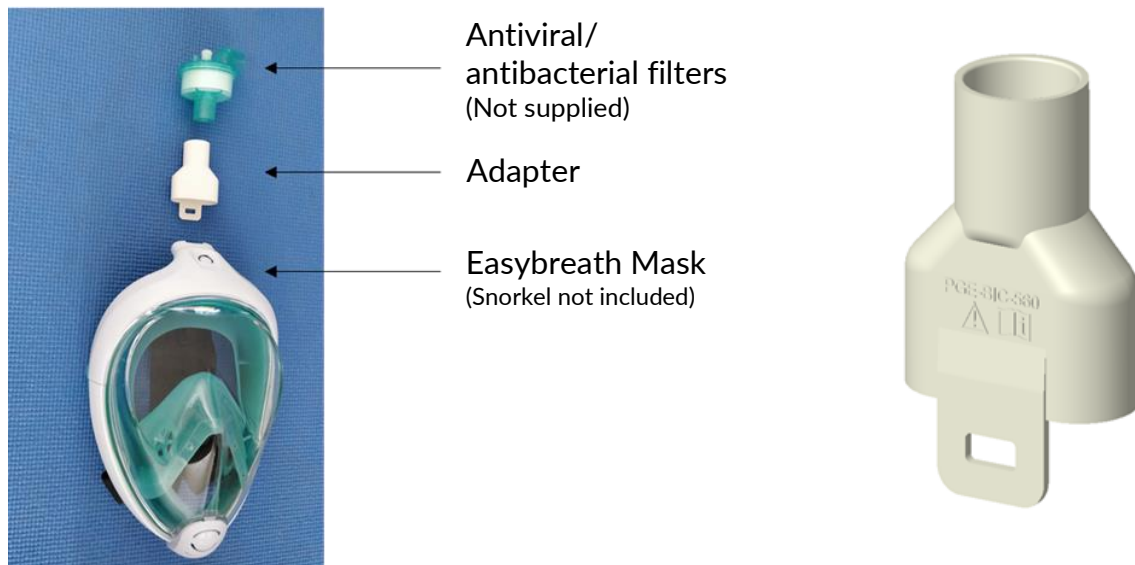
One of the key elements of the collective struggle against COVID-19 is the protection of all carers in direct contact with the patients. A cross-disciplinary team of researchers, engineers, makers, doctors, and manufacturers are working together to adapt the Decathlon full-face snorkeling mask called Subea into a personal protective equipment (PPE) against COVID-19.

A consortium was formed to urgently develop and produce at large scale a personal protective equipment for medical staff working in resuscitation units as an alternative to the 3D printing-based parts made popular over the Internet. At the initiative of Professor Prakash's team from Stanford University, this open-source solution is an antiviral filter adapter which can be fixed to the Easybreath Subea snorkeling masks.

This equipment was created only for resuscitation unit staff members who are hospital-based, as the hospital alone can ensure that utilization, cleaning, and decontamination conditions are respected.

Combining the Easybreath mask and the adapter developed by the consortium, while adding a filter, allows to transform a mask dedicated to leisure, covering the eyes, nose, and mouth, into a personal protective equipment to filter the breathing air. It aims at protecting the user against the transfer of microorganisms, body fluids, and particles, during critical medical actions on patients with or suspected of having the COVID-19.

This is an emergency solution to alleviate the shortage linked to the COVID-19 crisis. The mask is intended to be a reusable alternative to other personal protective equipment (masks and glasses) whenever no other appropriate protection is available because of limited resources due to the COVID-19 crisis. The equipment is available in different sizes to best fit the face. The adapter is universal for all sizes of the Easybreath mask. The equipment is designed to work with standard antiviral/antibacterial filters available in hospitals.



Thanks to an agile and open organization and in a few days only, the consortium successfully designed and 3D-printed the adapter for tests carried out in hospitals. It also drew and designed the mould. The consortium prepared all authorization documents for the competent authorities, launched the industrial production, and prepared the masks and adapters for shipping.

Industrial production of the adapter has been launched. In the past weeks, Decathlon has supplied masks to hospitals requesting them. Following the initial shipments, 25 000 adapters will be dispatched today to transform the mask dedicated to leisure into a reusable personal protective equipment.

The Consortium is currently speaking with the Ministry of Health. It is ready to ship, within a week, several tens of thousands of additional masks and adapters to hospitals, according to the needs identified by the Ministry.

Industrial drawings, documents, and instruction manuals linked to this development will be available as open-source within the next few days on <https://adaptateur-masque.planktonplanet.org>.

The **consortium who has developed and implemented this solution** is made of the following entities:

- Research: Stanford University USA, Plankton Planet,
- Creation & coordination in Europe: CNRS, Fondation Tara Océan,
- Medical & biomedical: Brest Hospital, Saint-Malo Hospital, Sorbonne University, Armand Trousseau Hospital
- FabLab: Atelier PontonZ, UBO Open Factory
- Regulations: Evanoy
- Manufacturers: Decathlon, BIC
- Other members: Ecole Polytechnique Fédérale de Lausanne, Elliptika, FM Logistic

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