Companies in France's Auvergne-Rhône-Alpes region step up to fight the COVID-19 pandemic by manufacturing a reusable face mask

By end-june, production will be equivalent to 500 million single-use masks

Since March 16, a collaborative ecosystem¹ formed and coordinated by the Grenoble-based collective VOC-COV has been working on the design and large-scale rollout of a reusable mask.

The OCOV[®] mask, entirely developed and manufactured in France's Auvergne-Rhône-Alpes region in record time, is affordable, sustainable and can be produced in large quantities.

As opposed to an FFP1 or FFP2 face filter, made solely of filtering material, the OCOV[®] is an FMP1 or FMP2 face mask featuring a flexible facepiece covering the nose, mouth and chin, as well as replaceable and reusable filters. The leakage rate authorised by the FM standard is five times less than that specified for the FF standard (FM: <2% / FF: <8%). The OCOV[®]'s flexible facepiece ensures a snug fit, thereby minimizing leakage compared to FFP1 and FFP2 filters or other washable masks. It provides a good seal between the atmosphere and the wearer's face (whether the skin is dry or moist and when the head moves). Particularly comfortable for extended periods of time, it can be reused up to 100 times thanks to five washable, interchangeable² filters, while its production cost is very competitive.

For the purposes of this project, France's Grenoble-based Atomic Energy Commission (CEA) based is providing access to its infrastructure and research/testing resources. Leveraging their know-how to very rapidly produce the first prototype, Michelin and CEA teams quickly mobilised alongside other regional industrial partners. This speed of response allowed mask production operations to begin in less than three weeks. Ouvry, a Lyon-based SME specialising in biological and chemical personal protective equipment, was chosen to manufacture and market the mask.

Production of a prototype batch of 5,000 units is currently underway. The goal is to produce one million masks per week by May, leading to total production of more than five million masks by end-June (equivalent to 500 million current single-use masks). Some 130,000 masks have already been reserved, a portion of which will be given to regional health agencies by Michelin.

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¹ An ecosystem formed and coordinated by the Grenoble-based collective VOC-COV, whose members include the CEA, large groups such as Michelin, ARaymond and Schneider, SMEs such as Ouvry, APA and Sofileta, as well as institutions and local authorities such as Grenoble City Hall, the Auvergne Rhône Alpes region, L'Agence Régionale de Santé, the Grenoble University Hospital, the Isère Prefecture, the French national board of physicians and the French society of disaster medicine.

² Each mask comes with five filters which can be reused approximately 20 times each.