

## Flexible & Wearable Electronics Application Experiments



StepUp Health ApS, founded in 2020 as a collaboration between the Technical University of Denmark, an established company and students who had an idea of measuring breathing to help sportspeople, but found a new meaningful application within Chronic Obstructive Pulmonary Disease (COPD) field.

[www.stepuphealth.dk](http://www.stepuphealth.dk)



### Problem to be solved

The Chronic Obstructive Pulmonary Disease (COPD) is currently the 3rd cause of death worldwide, with 25 million people with a severe version of it in the EU alone. Hospitalizations will occur more than once a year for those patients, and recent studies have shown that, by offering continuous monitoring for those patients that enable the doctors to proactively adapt treatment strategies, hospitalizations can be reduced up to 20%.

### Solution provided by SmartEEs

StepUp Health is a wearable breathing monitoring device for remote respiratory disease Management, more specifically COPD. StepUp Health is using a new type of sensor technology to measure respiratory parameters, offering an unprecedented accuracy in the field of home monitoring. It is a patch, glued on the skin and used daily for an hour, or overnight in some cases, monitoring the evolution of the baseline vital parameters. The device taking shape as a chest patch with a textile extrusion in which the breathing sensor is based, that can be worn on the chest with a maximally possible comfort to the patient. Medical personnel can track multiple COPD patients remotely by using "Professional's dashboard" which will allow quick and easy patient prioritization when choosing which patients might need immediate treatment.

### Business model & impact

The respiratory monitoring market is expected to witness a CAGR of 9.5%, during the forecast period. The respiratory diseases, such as asthma, lung cancer, COPDs, are increasing at an alarming rate in both the developed and developing countries, which is driving the respiratory monitoring market globally. The plan is to offer the solution to hospitals and nursing homes for 800 EUR, and monthly subscription for 45 EUR "Professional's dashboard". HC system/ Hospitals/ Insurance: 800 EUR for one device that includes COPD specific early warning system. With this business model, it is planned to reach 1% of customers during the first year in Denmark (i.e. 2000 COPD patients) by 2027.

