



SmartEEs Success Stories

ItoM Medical is a contract engineering & design company focussed on medical devices for monitoring & diagnostic purposes & wearable biometric sensing.

ItoM Medical has developed an extensive library of signal processing algorithms that can be implemented in medical devices on an IP license basis.

ItoM Medical is investing in the next generation of textile integrated wearables to enable customers to provide patients with the highest level of comfort during monitoring & measurement in real life situations.

www.itom-medical.com



Problem to be solved

Asthma attacks vary in severity & frequency from person to person. Asthma cannot be cured, but proper diagnosis, treatment & patient education can result in good asthma control & management. For children with asthma it is very challenging to achieve this, almost half of the children with asthma have a bad asthma control! This is an enormous problem; these children often fail to respond in-time when adverse effects occur. This often leads to an asthma attack, respiratory distress, or even emergency hospital visits. For children the symptoms become worse at night. It is important to recognize & avoid triggers that lead to a tightened airway.

Solution provided by SmartEEs

ORIGAMO (OverNIGHT Asthma MONitoring) is a monitoring system that targets to achieve good asthma control for children, leading to increased quality of life. The prototype consists of a smart-textile under-shirt, a miniaturized measurement & communication device, & a mobile app. The core technology is a high-end wearable device, equipped with various sensors & an EMG amplifier, which is specifically designed for use with dry/textile electrodes & allows measuring of the electrical activity of the main respiratory muscles in children while sleeping to evaluate airflow limitation. It is effortless & allows continuous assessment of symptoms over a period of multiple hours.

Business model & SmartEEs' impact

The connected T-shirt of ORIGAMO is a comprehensive solution compared to existing offers on asthma control. This niche market is addressing only 5% of the patients, this population is responsible for 50% of the total annual expenses in Healthcare. Better control of asthma would save 10,000€ per person per year, at with a total cost of ORIGAMO at 1,000€ per person per year. SmartEEs has helped ItoM Medical plan a spin-off, which will be founded as a joint venture. The management team is currently under a hiring process. SmartEEs supported ItoM in the very early stage of product development with a critical technical building block. This will permit the creation of a new company with a forecast to reach breakeven in 2022 & 1M€ in 2023, generating from up to 20 jobs.

