

BabySensor



Revolutionary Non-Contact Health Monitoring for At-Risk Infants

The Challenge – Monitoring At-Risk Infants at Home

Premature births, and the health conditions associated with them, are on the rise with 1 in 8 babies born prematurely. Worryingly, hospitalisations and deaths of premature babies in the first year of life are actually increasing. To ensure the welfare of infants with underlying health conditions, effective monitoring is essential. This is possible within hospitals, but existing baby monitors cannot provide the range or accuracy of information needed to detect possible health issues at home. Nor, crucially, can they advise parents on what to do with the information, which can lead to anxiety and unnecessary hospital visits.

The Solution – BabySensor-Pre

BabySensor-Pre is a first of its kind advanced baby monitor with a feature combination never seen before in a standalone device. Using a single high-definition camera and low-cost thermal camera, it will accurately measure key biometrics including pulse, skin temperature, breathing rate, blood oxygen saturation, facial cues and body movements without any physical contact with the baby.



The Funding

The Neon team secured BabySensor a €0.9m grant from the Eureka Eurostars programme to develop the key innovations underpinning BabySensor-Pre. These include the use of AI to detect blood oxygen saturation and pulse rate in low-light conditions, and elimination of false positives by correlating facial cues and environmental factors with biometric changes.

The Impact

Successful completion of the BabySensor-Pre project will give parents and medical personnel access to more accurate data, in all environments, without any sensors attached to the infant. This will improve neonatal care and reduce parent anxiety. Most importantly, it will help reduce the 14,000 infant deaths in Europe each year, half of which are linked to premature births. As a result of sales to parents and hospitals, the consortium expects to generate profits of €25m by 2029.



eurostars™



21 months



€900,000 Grant



BabySensor AS
(NO)
Glance Group Ltd
(UK)
VicarVision
(NL)
University College
Østfold
(NO)

neon
innovation