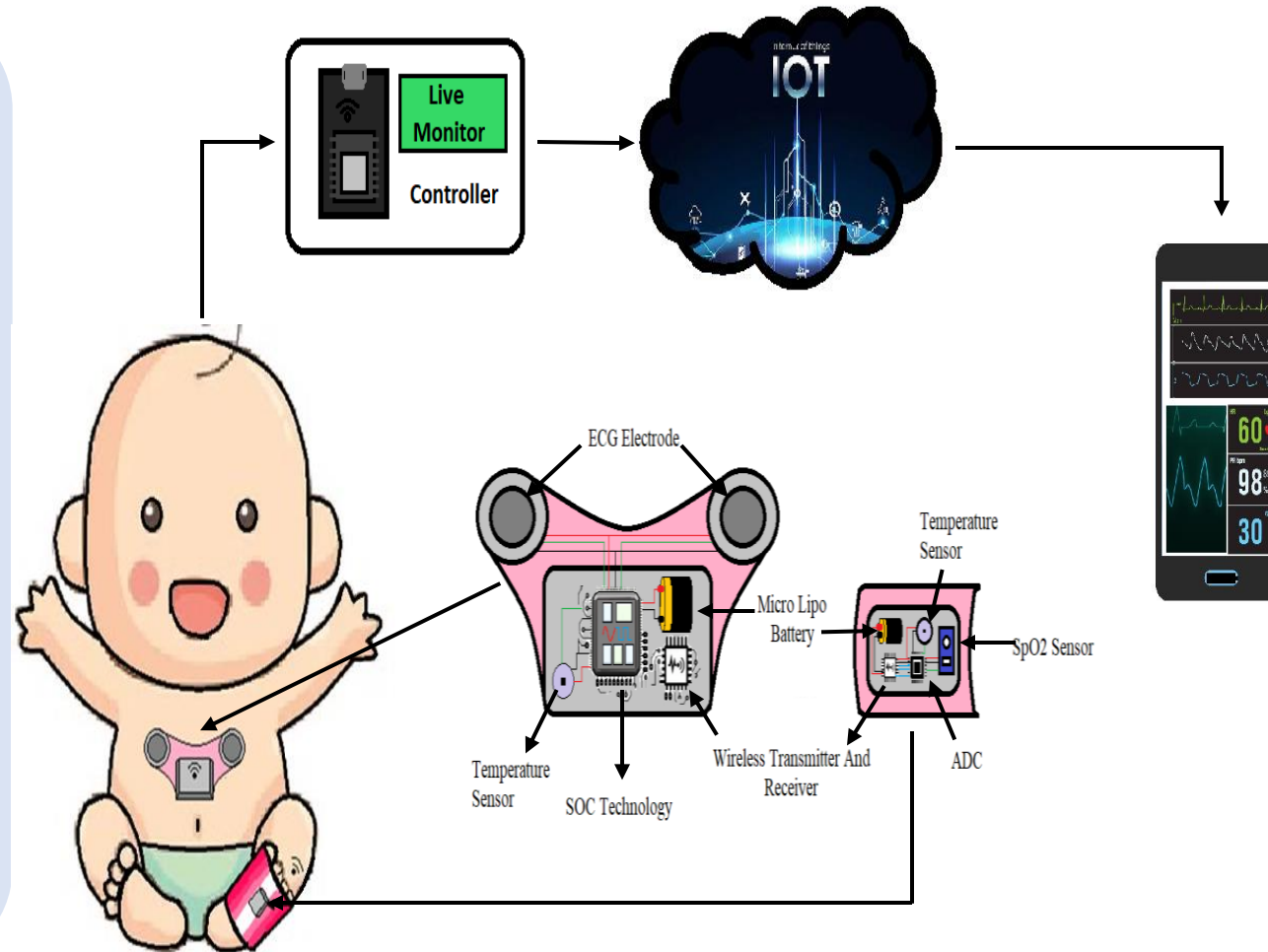




INFANT HEALTH MONITORING DEVICE

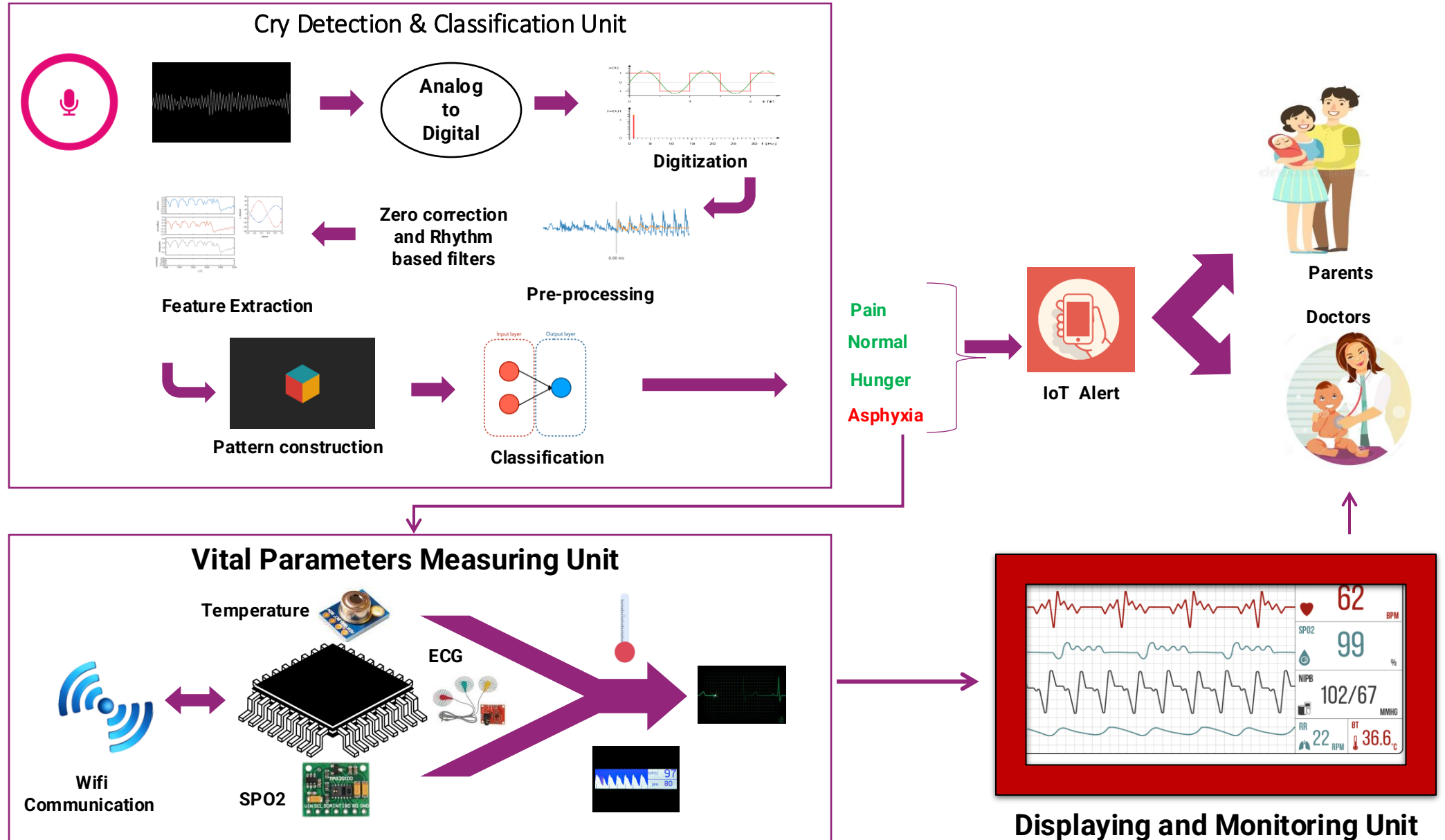
DESCRIPTION :

Our project is to create a wearable neonatal monitoring system, incorporating a microphone, SpO2 sensor, temperature sensor, and heartbeat sensor to track premature babies' health in NICUs. To build it, we'll design a compact device that securely transmits real-time data to a central station for healthcare providers to monitor and ensure timely care for these infants.



Parameters to validate effectiveness include assessing its accuracy in correctly identifying baby cries without generating false alerts, testing its sensitivity in various environmental conditions, measuring response times, and ensuring ease of use for caregivers.

PROPOSED SOLUTION :



ADAPTATION IN IDENTIFIED TARGET AUDIENCE :

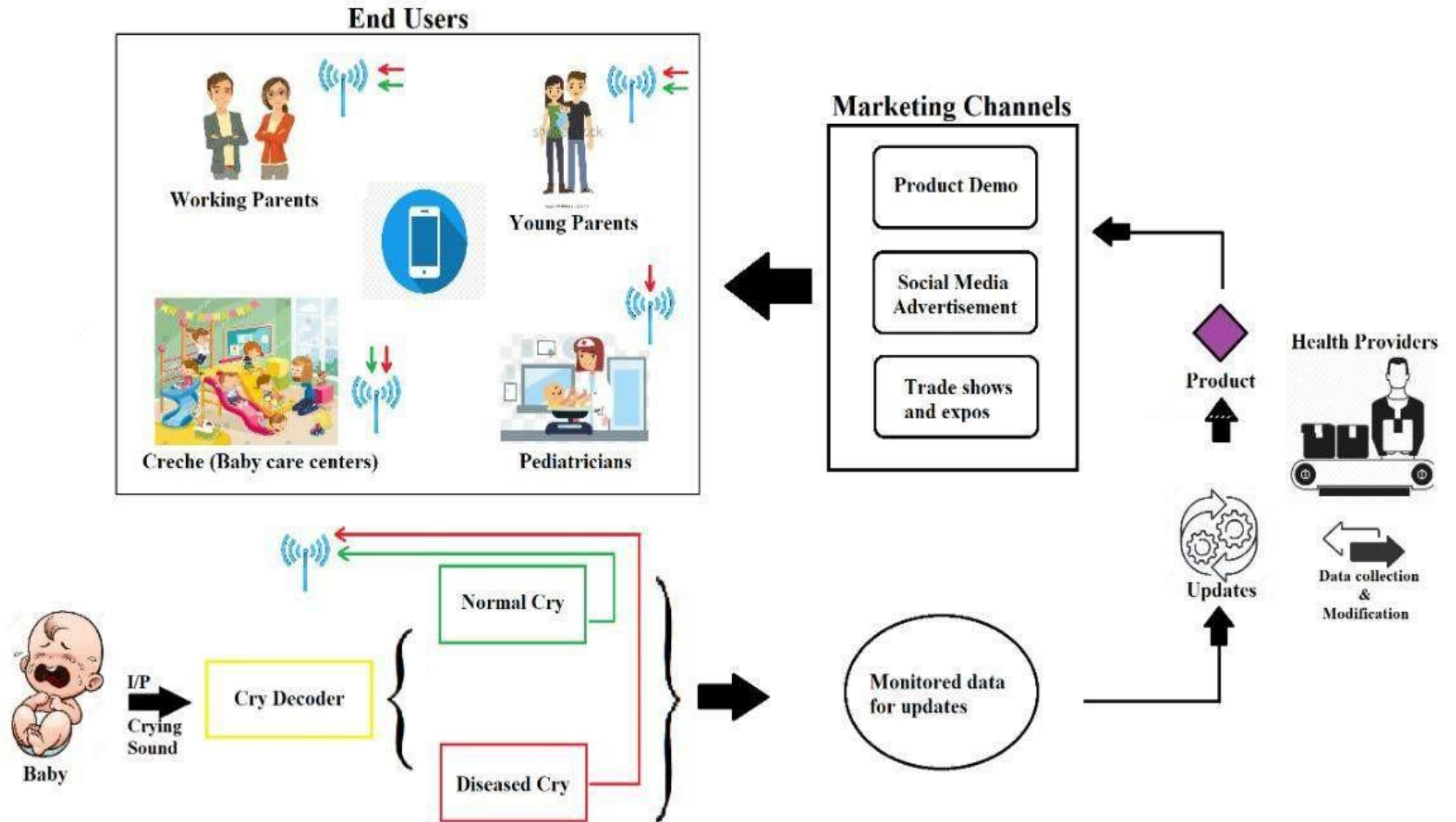
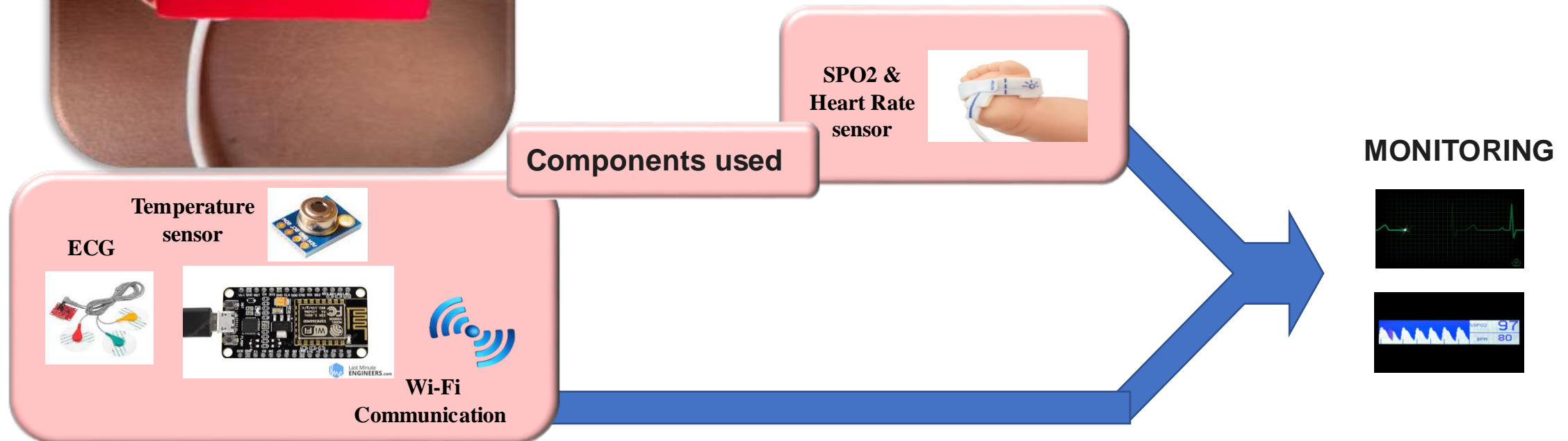


PHOTO PROOF FOR THE SOLUTION :

Fig 1. Chest Part



Fig 2. Leg Part



OBSERVED OR EXPECTED IMPACT :



Early detection

Our device detects and recognizes early signs of life-threatening conditions, promoting better health outcomes by continuously monitoring vital signs.



Comfort and Mobility for Infants

The device is wireless, allowing healthcare providers to remotely monitor neonates' vital signs and provide consultations and expert opinions from a distance



Staying Ahead of the Market

Integration of wireless neonate health monitoring devices with AI Electronic health record systems provides leading position in Market

OVERALL EXPERIENCE:

Presenting our infant health monitoring device project was a valuable learning experience in education and empowering.

BIGGEST LESSON LEARNED:

The project aims to address infant mortality by combining infant vital parameter monitoring and a baby cry detector. This approach involves medical sensors for vital parameter measurement, signal processing for cry classification, and a database for data management.

SCALABILITY:

Scalability is a vital aspect of our solution, ensuring it can accommodate a growing user base while maintaining performance and cost efficiency, ultimately reducing caregiver stress and enhancing its effectiveness.

TARGET AUDIENCE:

This device has the potential to enhance neonatal care worldwide, benefitting baby care centers, healthcare professionals, and young parents by reducing hospital admissions and providing comprehensive infant health monitoring.

TESTING WITH END USERS:

User Groups:

We selected a diverse range of user groups, including parents, caregivers, doctors, and nurses, to participate in the testing.

Prototype Testing:

Users were provided with a prototype of the cry detection system. While not the final product, it simulated key functions accurately.

Testing Environments:

Testing was conducted in various real-world settings, including neonatal care units and baby care center, to ensure the system's functionality in different scenarios.

User-Friendly Interface:

Users found the user interface to be intuitive and easy to navigate, regardless of their technical expertise. We have received the positive feedback.



REACTION AND INSIGHTS:

Safety and Durability:

Users expressed concerns about the device's durability when the baby moved or rolled. The protective layer was generally seen as effective but somewhat heavy.

Wireless Connectivity:

Healthcare providers appreciated the device's wireless capabilities, as it allowed them to remotely monitor neonates' vital signs and provide expert consultations from a distance.

Early Detection:

Users were impressed with the system's ability to detect early signs of life-threatening conditions, acknowledging its potential to improve infant health outcomes

Baby Care Centers:

Pediatricians and nurses in baby care center can benefit significantly from the device, simplifying baby care without difficulties.

