Beat-IT

PROJECT INNOVATIONS AND SOLUTIONS

1

Improving top athletes' performance: this project creates quantifiable insights into several key parameters. When these are combined with existing parameters, it will lead to the first sport tracker that can measure all the scientifically validated parameters of internal load. Internal load can best be described as how the body reacts physiologically and psychologically to the workload of a certain training session. This technology will allow trainers and coaches to help their athletes achieve their best performance while avoiding injuries.

2

Reducing fear for patients during cardiac rehabilitation: heart disease is the main cause of death in developed countries, causing about a quarter of all deaths. Exercise-based heart rehabilitation (CR) has been proven to lower the chance of death by 25% in the first year after a heart event. However, data from the US and EU show that only 15%–30% of patients who had heart surgery or a heart event take part in these programs. One of the main reasons is that patients often feel more anxious and scared of negative outcomes during exercise. This anxiety is often due to a feeling of loss of control after a heart event. The tracker system developed in BEAT-IT will offer continuous, real-time insight into ECG.

GOAL

Our goal is to develop a new technology that enhances the abilities of a conventional heart rate monitor with electrocardiogram (ECG) monitoring during for example sports activities and physiotherapy. This improves health tracking while maintaining a simple, user-friendly form factor.

Currently, ECG monitoring in these situations is not possible, because the user's movements disturb the ECG signal. We plan to achieve these enhanced abilities by adding small sensors and smart signal processing to a wearable garment. The BEAT-IT solution will be a breakthrough innovation for the cardiac rehabilitation and top sports athlete tracking markets.

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