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## HEALTHCHAIN STORIES

# MOVEBUDDY: TURNING EVERYDAY MOVEMENT INTO LASTING HEALTHY HABITS

## THE NEED

Childhood obesity is a major and growing health challenge, affecting nearly 1 in 5 children in Belgium and the Netherlands. It has significant long-term consequences, including increased risks of chronic diseases such as diabetes and cardiovascular conditions, as well as psychosocial issues that impact quality of life and societal productivity.

Current clinical practices rely heavily on self-reported data and subjective observations, which are prone to inaccuracies and bias. Additionally, healthcare professionals often apply generic, one-size-fits-all approaches that fail to address the specific needs of individual children.

There is also a lack of continuous monitoring between consultations, limiting clinicians' visibility into patients' daily activity. Furthermore, existing fitness data is fragmented and poorly integrated into clinical workflows, increasing administrative burden and reducing effectiveness of interventions.

The main objective is to develop a digital solution capable of collecting accurate, objective behavioural data (e.g., physical activity, sleep, sedentary time) and integrating it into clinical systems to improve follow-up, personalization of care, and overall outcomes in pediatric obesity management.

## THE HEALTHCHAIN SUPPORT

HealthChain supported Healthcare Organisations in identifying their innovation challenges and selecting companies to address them. They worked closely as an interregional team to co-create, test, and validate a solution aligned with real clinical workflows, patient needs, and organisational constraints. The project provided financial and business support to boost the solution's market-readiness and commercialisation.



## THE SOLUTION

RAAK developed MoveBuddy, a screen-free wearable designed to motivate children with obesity to increase physical activity and build healthy daily routines in collaboration with their parents.

The device uses LED-based feedback to track movement throughout the day and connects to a companion app that enables shared parent-child reflection. A key innovation is the “shared reflection” model, shifting the focus from simple tracking to behavioural change and habit formation.

The solution integrates directly into hospital Electronic Health Records (EHR) through a standardized API, providing clinicians with structured, reliable behavioural data and eliminating manual data entry.

Its unique value lies in being:

- Screen-free and child-friendly (reducing digital fatigue)
- Clinically integrated (EHR connectivity)
- Affordable and scalable
- Specifically designed for pediatric obesity care pathways



# IMPACT

The MoveBuddy solution has demonstrated meaningful impact across the pediatric obesity care ecosystem by improving both clinical practice and patient engagement. Healthcare professionals benefit from access to continuous, structured, and objective behavioural data, which enhances clinical decision-making and enables more personalized follow-up. At the same time, children and their families experience increased motivation and adherence to healthy routines through the shared reflection approach, fostering long-term behavioural change.

From an organizational perspective, healthcare providers gain efficiency through the automation of data collection and integration, significantly reducing administrative workload. The project has also attracted growing interest from healthcare organizations, insurers, and strategic partners across Belgium and the Netherlands, reinforcing its potential to scale and contribute to more sustainable and effective obesity management pathways.

# OUTCOMES

The pilot demonstrated strong validation of both usability and clinical impact:

- 100% of participating children (8 users) successfully used the wearable and app
- 80% increase in motivation to move, according to parent surveys
- Most participants reached the clinical target of 60 minutes of daily physical activity, with some doubling previous levels
- High reliability in data synchronization between device and app
- Automated EHR integration reduced administrative workload for healthcare professionals
- Validated proof-of-concept showing high engagement from families and strong clinician interest

# SUSTAINABILITY

RAAK has established a comprehensive strategy to ensure the long-term viability and scalability of MoveBuddy. The solution is progressing from a prototype to a mass-producible, MDR Class I certified medical device, with plans to advance toward Class IIa certification as further clinical validation is achieved. In parallel, the company is preparing the creation of a dedicated spin-out entity that will lead commercialization efforts, secure funding, and support market expansion.

The deployment strategy focuses on scaling adoption across Pediatric Multidisciplinary Obesity Centers and hospitals, initially in Belgium and the Netherlands and later across Europe, leveraging standardized EHR integration and compliance with regulatory frameworks.