



Co-funded by
the European Union



HEALTHCHAIN STORIES

REABILITAR@MENTE: ACTIVATING BODY AND MIND FOR BETTER RECOVERY

THE NEED

At Centro Hospitalar e Universitário de Coimbra, 70% of medical admissions and 73% of medical hospital days belong to patients over 65. However, it has been recognised that the hospital response is not adequate for this population, with long stays in hospital and progressive functional and cognitive decline.

Associated with the aging process are cognitive changes that cause disabilities and limitations, such as reduced mobility, decision-making, memory loss, difficulty in managing daily routines, among others.

There is evidence that one of the predictors of functional decline during hospitalization is cognitive impairment. With this in mind, the aim is to develop a rehabilitation program that includes exercises in the areas of cognitive rehabilitation, on topics related to each person's personal tastes, as well as some occupational activities from their current and past life.



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

A digital cognitive-motor training system designed to improve memory, orientation, and functional independence in hospitalized older adults. It offers three flexible interaction modes tailored to different mobility levels:

- Box: Full-body, movement-based interaction for patients with high mobility.
- Webcam: Head and upper-limb tracking for patients restricted to bed.
- CogWeb: Traditional touch-based training via tablet or computer.

IMPACT

- The pilot identified a critical need to simplify the prescription workflow, as the initial design was too complex for clinicians under time pressure.
- The experience led to reframing the market focus towards more feasible deployment contexts, such as in-room use and post-discharge continuity, rather than just shared-space interactions.

OUTCOMES

The pilot provided several outcomes regarding its execution and engagement of 30 patients, averaging 86 years old.

- More than 80 training sessions were performed.
- Based on patient fatigue and tolerance, the session duration was quantitatively reduced from 15 to 9 minutes to improve adherence.

SUSTAINABILITY

The strategy for long-term sustainability and commercialization includes:

- A hybrid care model (hospital → home), ensuring the solution remains relevant to patients after they leave the hospital to prevent cognitive regression.
- A four-year plan starting with a “validation-focused” first year (Year 1) to build evidence, followed by progressive commercial expansion in Years 2–4.

TESTIMONIALS

“Participating in HealthChain allowed us to co-create and pilot a solution in a real hospital setting, ensuring that development was grounded in clinical reality rather than assumptions. The close collaboration with healthcare professionals was essential to adapt the solution to operational constraints, usability needs, and real patient contexts. This experience strengthened both the technical robustness and the market readiness of the solution, providing clear insights into adoption pathways, evidence requirements, and go-to-market strategy for digital health solutions. This support has enabled us to undertake the development of a complex product with strong market demand, ensuring a level of quality, robustness, and alignment with real clinical environment requirements that would have been difficult to achieve without this backing. It has also facilitated technological validation in a real-world context, reducing risks associated with scaling and the future exploitation of the product. From the standpoint of technological leadership, the project has contributed significantly to the consolidation of our software architecture, the strengthening of our internal development capabilities, and the definition of a clear technological roadmap, oriented toward sustainable growth and the positioning of the company as a technology reference in a high-value strategic sector.”

