CLINICAL EVALUATION STUDY

ReAble Labs

Health Innovation Hub Ireland

ReAble Labs is an Irish medical technology company developing an affordable myoelectric prosthetic hand, with an accompanying software platform for fitting, monitoring and support. Founded in September 2025 and headquartered in Cork, the company was established by:

Seán Barrett, CEO and CTO, an Electrical and Electronic Engineering student at University College Cork with previous industry experience at Boston Scientific.

William Hartley, COO and Clinical Lead, a medical student at Trinity College Dublin.

2026 winners
Hult Prize Irish National Final and AIB Student Impact Award for Enterprise and Innovation



About Health Innovation Hub Ireland

Health Innovation Hub Ireland (HIHI) was established by the Department of Business, Enterprise and Innovation and the Department of Health and is supported by Enterprise Ireland (EI) and the Health Service Executive (HSE) to drive collaboration between the health service and enterprise. We offer companies the opportunity for pilot and clinical evaluation studies and we provide the health service access to innovative products, services and devices that they may not otherwise be exposed to.

HIHI is built on the recognition that collaboration with enterprise can benefit patient care, patient pathways and outcomes.

We assess all concepts for healthcare innovation from those on the frontline – from clinician to porter. We encourage healthcare professionals to get in touch with HIHI if they have an idea or solution to how something in your job might work better.



The Healthcare Challenge

The loss of a hand significantly affects a person's independence, mobility and quality of life. However, many upper- limb amputees never gain access to a powered prosthetic device.

Advanced myoelectric prosthetic hands typically cost between €15,000 and €100,000, making them inaccessible for many patients and difficult for healthcare providers to fund at scale. Even when a prosthesis is fitted, common issues include excessive weight, discomfort, maintenance difficulties and lengthy repairs. Often a single component failure means the entire device must be returned to the manufacturer, leaving the user without their prosthesis for long periods.

During this evaluation, consulting prosthetists reported:

60–70%
opt-out during limb-fitting rehab

50%
upper-limb prosthetic abandonment

This aligns with published evidence that cost, weight and fit remain the biggest barriers to long-term prosthetic use.



The Healthcare Solution



Diego
Myoelectric Prosthetic Hand

Diego has been designed around three key principles: **affordability**, **comfort** and **repairability**.

With a target retail cost of approximately €5,000, Diego aims to be far more accessible than existing myoelectric prosthetic hands.

Two electromyographic (EMG) sensors on the forearm detect muscle signals, so users can open and close the hand intuitively.

Users can choose from six standard grip patterns, including fist, pinch and tripod grips, and can also create customised grips suited to their own needs and daily activities.

A key innovation is the **modular finger design**. Each finger is an independent module that can be replaced quickly at home or during a clinic visit. This minimises downtime and removes the need to return the whole prosthesis when a single part needs repair.

Affordability **Comfort** **Repairability**

HIHI Role

HIHI carried out a clinical evaluation of the ReAble Hand for real- world clinical practice, connecting ReAble Labs with:

- Prosthetists at Ottobock, Cork
- Clinicians at the National Rehabilitation Hospital (NRH) Staff
- in the POLAR Unit, Mercy University Hospital, Cork

HIHI also coordinated a clinical observation visit at the NRH. Findings were compiled into a Clinical Evaluation Final Report.



Outcome Report

The evaluation confirmed a significant, clearly defined unmet clinical need. Clinicians identified **cost, weight and fit** as the main reasons patients decline or stop using upper-limb prostheses, and agreed that the ReAble Hand directly addresses these barriers.

Key clinical feedback

Electrode integration: reliably integrating electrodes with the silicone liners prosthetic users wear.

Consistent positioning: a repeatable donning position for reliable muscle-signal detection.

Next steps

The ReAble Labs team is progressing their device development and intend to conduct user evaluations product pilots and regulatory studies.

Testimonials

"I had very insightful interactions with the ReAble Labs team. The vision of bringing good quality devices to improve the quality of life for those in all areas of the globe stands as testament to the drive and passion in the team. I look forward to seeing them progress."

Iain Briggs, Prosthetist, National Rehabilitation Hospital, Dún Laoghaire

"*Working with Health Innovation Hub Ireland has been a pivotal step for ReAble Labs. As an early-stage company developing an affordable myoelectric prosthetic hand, we gained structured access to prosthetists and rehabilitation clinicians that we could not have secured on our own. Their feedback validated the unmet needs around cost, weight and fit, and gave us clear, practical direction on both our hand and our socket design process. Noreen Lynch and the HIHI team made the entire process straightforward."*

Sean Barrett, CEO ReAble Labs

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