

Expertise: Product Development

Industries: Life Science

Smart wheeled walker reduces falls – a development project with care at its core



Overview of the partnership

Partners: Walker Development and Consat Engineering
Objective: To develop a wheeled walker with a sensor-based reminder function that helps prevent falls among older adults.

By combining clinical experience from elderly care with technical expertise from Consat, Walker Development has created a smart wheeled walker designed to reduce falls. The project “Keep on Rolling” shows how innovation and care can go hand in hand.

Challenge

Falls among older adults often occur when wheeled walkers are not used, especially for short distances at home.

Solution

A sensor-based reminder function that encourages wheeled walker use – developed by Walker Development in collaboration with Consat Engineering.

Walker Development identified a need to create safer mobility aids for older adults – not just physically stable products, but solutions that are actually used in everyday life. In collaboration with Consat Engineering, a wheeled walker with smart technology was developed to encourage use and help prevent falls. Through student placements, thesis projects and close collaboration with the City of Helsingborg, the technology became a reality.

A pragmatic partner

When Orvar Hurtig, CEO of Consat Engineering, met Christian Persson – an occupational therapist and placement student – the idea of a wheeled walker with a reminder function was born. Christian joined as an intern and developed the software. In collaboration with the City of Helsingborg and two students from Chalmers University of Technology, a cross-functional team was formed, combining healthcare experience with technical expertise – all with user safety at the centre.

The challenge

In collaboration with Consat Engineering, a sensor-based reminder function was developed. It detects when someone walks past the wheeled walker without using it and emits a light or sound signal as a gentle prompt. To protect the technology, a mechanical housing was designed and the electronics were seamlessly integrated into the wheeled walker’s frame.

The solution

Falls among older adults are a major societal problem – both in terms of human suffering and cost. Nearly 100,000 people in Sweden require hospital care each year due to falls, many of which occur at home when wheeled walkers are not in use.

Walker Development aimed to create a mobility aid that not only provides physical support but actively encourages use – especially for short distances where many choose to leave the wheeled walker behind.



Key outcomes

- Sensor-based feature that encourages use
- Prototypes are being tested in real-life settings in Helsingborg
- Next step: automatic locking in rest mode

Summary

- Walker Development wanted to develop a wheeled walker that helps prevent falls.
- Consat Engineering provided software, electronics and mechanical housing.
- The project is based on internships, collaboration with the city and real-world user testing.
- Next step: further development and scaling up.

The result

The wheeled walkers equipped with the reminder function have been well received in pilot environments. Early feedback from users gives the team valuable input for refining both functionality and design.

The next step in development is a self-locking feature – enabling the wheeled walker to lock its wheels automatically when someone sits down, helping to prevent accidents when standing up.

Value-driven innovations

“Keep on Rolling” shows how close, cross-functional collaboration between healthcare, engineering and users can create assistive devices that truly make a difference. By integrating user feedback from an early stage, Walker Development and Consat Engineering are building a product that is not only technically advanced – but also empathetic.

“Assistive device development is close to my heart, so I’m really pleased that a large engineering company like Consat is getting involved.”

Christian Persson, occupational therapist and placement student

Contact us

Want to learn more about how we can support you in assistive technology and product development? Contact us – we’d be happy to tell you more or book a meeting.