

SIMULATION OF THE PATIENT MOVEMENT IN THE REHABILITATION FACILITY

The size of the rehabilitation facility	
specialist clinics	1 - 10
number of beds	100 - 300

Description

In the rehabilitation facility patients with central and peripheral nervous system injuries, spinal surgeries, and varying degrees of mobility limitations are hospitalized for about three months.

The patients move between ambulances to attend daily procedures, covering average distances of 2-5 km each day. At any given time, the transport of patients is supported by a team of approximately 5 caregivers.

To facilitate the movement of patients efficiently, including those requiring wheelchairs, **the goal is to create a simulation model reflecting the layout of facilities and patient movements during the day.**

This model will inform the design of assistive technologies, potentially including automated transport systems for the most severely affected patients. It will also enable the assessment of the potential benefits of various measures, such as robotic transport, motorized walkers, adjusting procedure schedules, modifying critical areas, and more.

Emphasis should be placed on the actual dimensions of hallways, wheelchairs, elevator capacity, and identification of congestion points.

Anticipated impacts include improved patient transportation options, reduced physical strain on caregivers, better capacity planning, improved scheduling of procedures and cost-effective decision-making for the rehabilitation facility.

This simulation model will aid in specifying requirements for assistive technologies and evaluating their potential benefits before investing into their implementation.

We are seeking innovative solutions that are at least in the stage of experimental proof of concept (TRL level).

Opportunity

DEX IC is initiating an open call to enable the dialogue between the Challenge provider and the potential problem solvers for this Challenge.

If you are interested in participating, please submit a pitch presentation of your proposed or existing solution for the challenge.

Your pitch should be confined to either 10 slides or 7 pages.

Mandatory Components of the Proposal

Understanding of the Requested Solution: The proposal should contain a clear and detailed explanation of how you understand the requested solution. Describe its key features and functions.

Solution Proposal: Explain the solution you are proposing and how it should be implemented.

References: If you have previously worked on similar projects or have experience in healthcare innovation, provide references. Include information about past successful implementations and projects that could support your ability to address this challenge.

Technology Readiness Level Specification: Specify the current level of your proposed solution.

The submission deadline is 11.11.2023.

The authors of the top pitches will be selected and invited by DEX to join an Open Market Consultation Session with the healthcare providers.

In this session, participants will gain further insights into the challenge, understanding the provider's requirements in more depth. They will also discuss viable solutions, potential obstacles in development, and the prospects of pilot programs.

After these consultation sessions, the healthcare providers will refine the challenge description based on the discussions and feedback.

Then, the selected innovative suppliers/solvers will be invited to participate in a public tender, pilot or other form of cooperation based on the TLR stage of their solution.