# DIGI4Care

## First experiences with the introduction of digital technologies in nursing homes

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26. June 2025
4. SOCIO SUMMIT CONFERENCE - DIGITALIZATION FOR RESILIENT SOCIAL SERVICES

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# DIGI4CARE

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## About DIGI4CARE

- DIGI4Care aims to support the implementation of innovation and digital technologies in the provision of social and health care through transnational cooperation.

- The project aims to develop, test and validate joint solutions that address the main challenges of the implementation and expansion of digital technologies in healthcare.

- The use of digital technologies aims to increase the quality of health services and improve patient outcomes.

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## About DIGI4CARE

- The project assesses and validates the feasibility, benefits and added value of integrating digital technologies into healthcare processes and workflows.

- The DIGI4CARE partnership includes 11 partners from 7 countries, each representing different stages of innovation and integration of digital technologies in healthcare.

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# About DIGI4CARE – 4 PILOTS

PILOT 1

- Diabetes mellitus, Cardiovascular disease
- Prevention, prediction, diagnostics

PILOT 2

- Diabetes mellitus, Cardiovascular disease
- Primary care

PILOT 3

- Diabetes mellitus, Cardiovascular disease
- Secondary care

**PILOT 4 - Leads by Prague University of Economics and Business**

- **Cognitive disorders – Alzheimer's disease, dementia, stroke**
- **Outpatient and inpatient care, long-term inpatient care**

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## About PILOT 4

- Testing the implementation of digital solutions in the post-clinical rehabilitation phase in outpatient and inpatient facilities in the field of care for people suffering from cognitive impairment - Alzheimer's disease, dementia, stroke.

- Partners and institutions from the Czech Republic, Austria and Bosnia and Herzegovina are involved in the pilot 4. The technologies are currently being implemented in the Czech Republic.

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# About PILOT4 – CZ: Project team

Peter Pažitný (researcher)

Kristina Randlová (researcher)

Lenka Vetýšková (project manager)

Daniela Kandilaki (researcher)

Marek Řehoř (researcher)

Aneta Lejčková (communication manager)

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## About PILOT4 – CZ

Place of technology implementation:
3 nursing homes in the Vysočina region

- 1 public nursing home + a home with a special regime (Alzheimer's home)
- 1 public nursing home
- 1 private nursing home with a special regime (Alzheimer's home)

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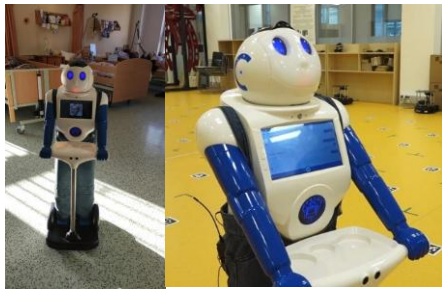
## About Pilot4 - CZ

Implemented technologies:

- Vital signs monitoring technology (1 device measures 6 vital signs – temperature, heart rate, blood pressure, oxygen saturation, electrocardiogram and blood glucose)
- Robot for social and cognitive rehabilitation
- Cubes for cognitive rehabilitation
- Speech transcription for faster documentation
- Motion and fall monitoring (to be implemented next month)

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## About PILOT4 – CZ

Which patients are incorporated into the use of technologies?

Clients with cognitive deficits due to Alzheimer's disease (AD)

The pilot covers different stages of AD

- Early
- Middle
- Severe

At least half of the patients will have comorbidities:

- Diabetes mellitus
- Cardiovascular disease

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## About PILOT4 - CZ

Data collection:

### Technology acceptance questionnaires

- based on the Technology Acceptance Model
- data collected from **employees** and **clients**
- Respondents answer questions using a Likert scale (from 1 to 6), once a month

### Interviews on the impact of technology on work processes

- based on the Organisational Aspects of Health Technology Assessment methodology by EUnetHTA
- data collected from **facility management** and **senior staff**
- once a quarter

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## About PILOT4 – CZ
## Current project phase:

The technologies (except for the motion monitoring technology, which will be implemented in July 2025) were implemented into the facility in the first quarter of 2025.
The use of technologies and current collection will take place until 12/2025-03/2026.

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## **PILOT 4, First experiences -** Technology Acceptance – Staff

- Technology acceptance by employees in the first months decreased compared to the expected acceptance measured before the technology was implemented.
- The decrease in values is a natural process of acceptance, given the higher learning difficulty at the beginning of technology adoption and the first technical problems associated with the implementation of a new technology.

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## **PILOT 4, First experiences -** Technology Acceptance – Staff

- The main questions related to technology acceptance:
  - When (or whether?) will technology acceptance start to increase and at what value will it stop?
  - What factors influence the technology acceptance?

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# **PILOT 4, First experiences**: Technology Acceptance – Staff

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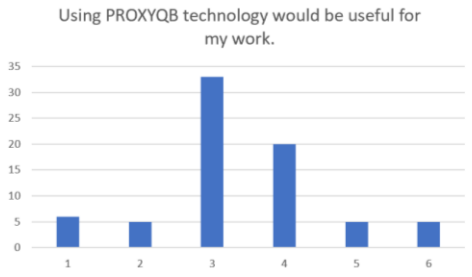
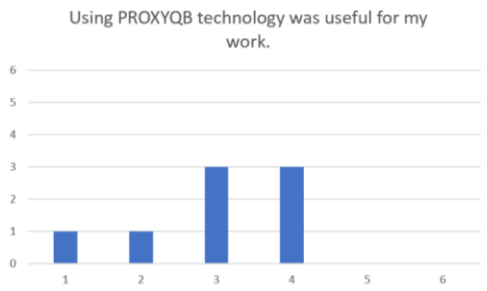
Technology: Cubes for cognitive rehabilitation

Technology Acceptance (1 strongly disagree -> 6 strongly agree):

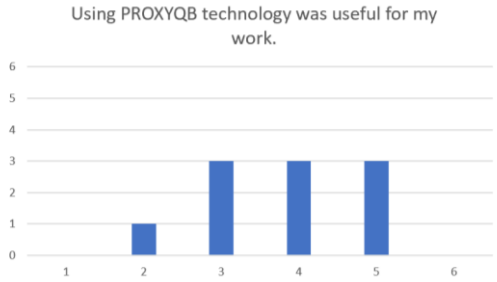
before technology implementation




1 month after implementation




2 months after implementation



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# **PILOT 4, First experiences**: Technology Acceptance – Staff

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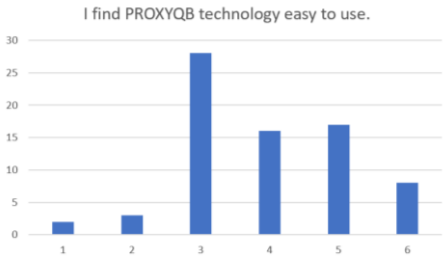
Technology: Cubes for cognitive rehabilitation

Technology Acceptance (1 strongly disagree -> 6 strongly agree):

before technology implementation

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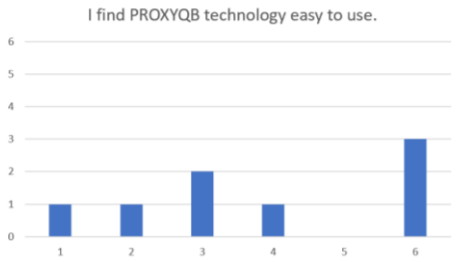


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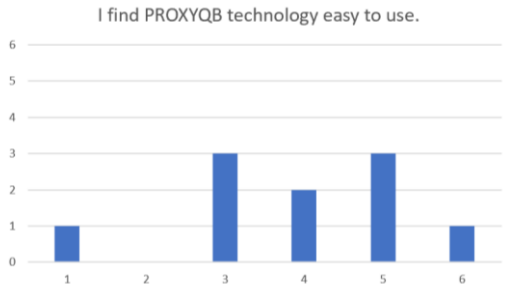




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# **PILOT 4, First experiences**: Technology Acceptance – Staff

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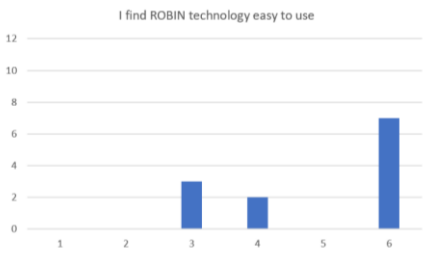
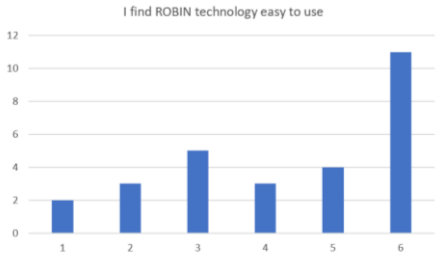
Technology: Robot for social rehabilitation

Technology Acceptance (1 strongly disagree -> 6 strongly agree):

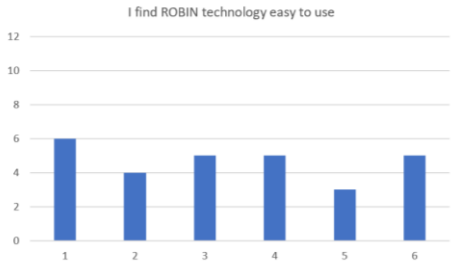
before technology implementation




1 month after implementation




2 months after implementation



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# **PILOT 4, First experiences**: Technology Acceptance – Staff

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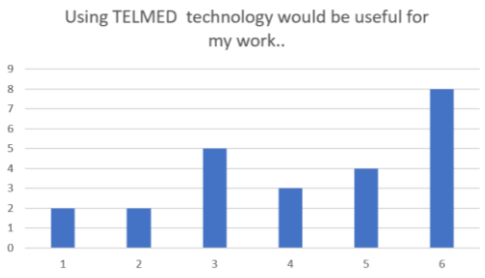
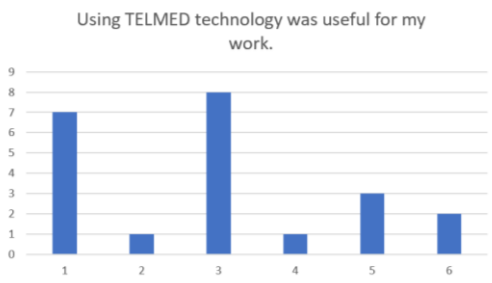
Technology: Vital signs monitoring technology


Technology Acceptance (1 strongly disagree -> 6 strongly agree):

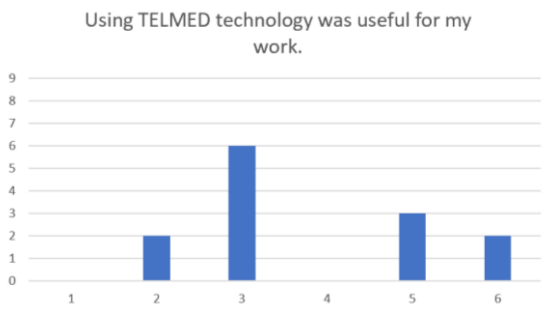
before technology implementation




1 month after implementation




2 months after implementation



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## **PILOT 4, First experiences**: Main initial barriers to implementation

- **Insufficient basic technological infrastructure**:
  - **Missing or weak internet connection, Wi-fi**
  - Lack of available mobile phones (e.g. for collecting vital signs measurement results)
  - External technical support - technician is not in the nursing home every day and solving the technical problem is not possible immediately

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# **PILOT 4, First experiences**: Main initial barriers to implementation

- **First technical problems of the technologies:**
  - Charging issue with cognitive rehabilitation cubes (resolved)
  - Social rehabilitation robot media volume levels vary - disturbing for clients (resolved)
  - Incorrect glucose measurement using vital signs monitoring technology (resolved)

- **Slow responses from technology suppliers to technical issues:**
  - Technology suppliers often respond slowly to technical issues; during response time, it is sometimes impossible to use the technology.

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# Thank you for your attention.

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