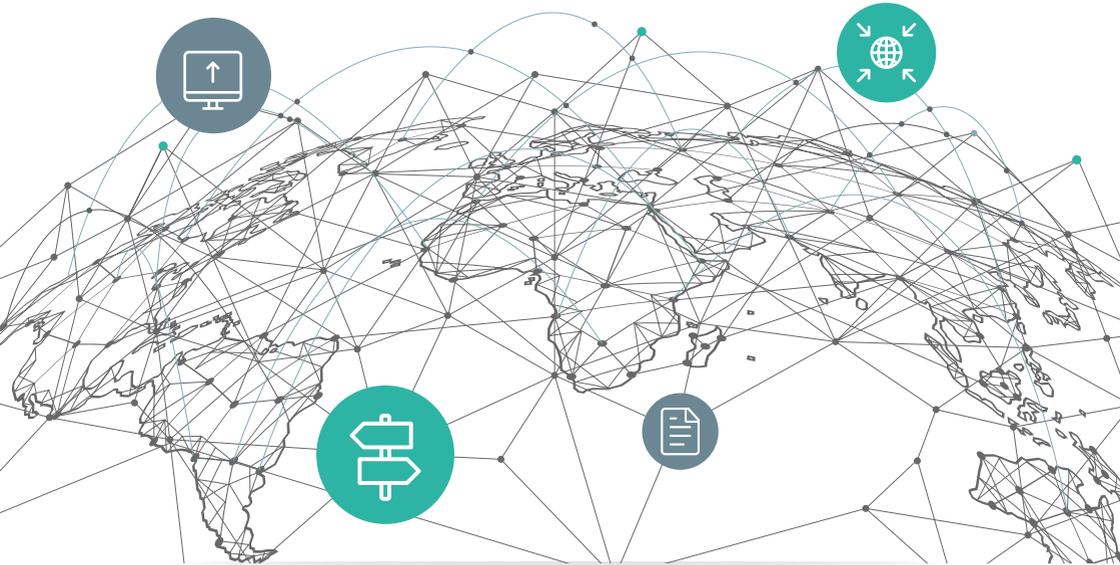


Digital transformation for care facilities, tested in practice

Insights from the DigiCare4CE project



Project DigiCare4CE

The ageing population presents new challenges for long-term care systems. **DigiCare4CE** introduces digital innovations into care facilities to make care for older adults more accessible, better coordinated, and user-friendly. The project connects experts across Europe, tests modern technologies in real-world conditions, and develops practical tools for their implementation.

Why is DigiCare4CE important?

- > Supports digital transformation of care facilities
- > Provides tools that simplify caregivers' daily tasks
- > Aims to improve services for older adults in long-term care facilities.

Key Project Outputs

- > DigiCare4CE Model - A reference framework for the digital equipment level of long-term care facilities
- > DigiCare4CE Online Check - A tool that helps facilities assess their current level of digitalisation and uncover paths for improvement
- > Transnational Practitioners Guides - The checklists featuring real-world case studies on integrating digital technologies into daily care, highlighting potential pitfalls during the digitalisation process.
- > Innovation Plans - A regional strategy plan to help providers adopt new tools and improve their digital capabilities.

Who is behind it?

The project brings together **10 partners from 7 countries** across Central Europe - including universities, research institutions, healthcare organizations, sectoral agencies and social service providers. This project is supported by Interreg CENTRAL EUROPE, a European Union-funded programme supporting transnational cooperation projects.



Germany

Technische Hochschule Deggendorf

Gesundheitscampus Bad Kötzing
Landshuterstraße 1e
93444 Bad Kötzing
www.th-deg.de



Austria

Geriatische Gesundheitszentren der Stadt Graz

Albert-Schweitzer-Gasse 36
8020 Graz
www.ggz.graz.at



NÖ Landesgesundheitsagentur

Stattersdorfer Hauptstraße 6/C
3100 St. Pölten
www.landesgesundheitsagentur.at
www.healthacross.noelga.at



Italy

Istituto per Servizi di Ricovero a Assistenza agli Anziani

Borgo Mazzini 48
31100 Treviso
www.israa.it



Slovenia

Inštitut Antona Trstenjaka za gerontologijo in medgeneracijsko sožitje

Resljeva 7
1000 Ljubljana
www.inst-antonatrstenjaka.si



Czech Republic

České vysoké učení technické v Praze

Český institut informatiky, robotiky a kybernetiky

Jugoslávských partyzánů 1580/3
160 00 Praha 6, Dejvice
www.ciirc.cvut.cz



Asociace poskytovatelů sociálních služeb České republiky, z.s.

Vančurova 2904
390 01 Tábor
www.apsscr.cz



Slovakia Technická univerzita v Košiciach

Letná 1/9
042 00 Košice-Sever
www.tuke.sk



Európske zoskupenie územnej spolupráce Via Carpatia s ručením obmedzeným

Námestie Maratónu mieru 1
042 66 Košice
www.viacarpatia.eu



Poland Rzeszowska Agencja Rozwoju Regionalnego S.A.

ul. Szopena 51
35-959 Rzeszow
www.rarr.rzeszow.pl

Pilot Actions:

Testing Digital Innovations in Practice

Eight out of ten DigiCare4CE partners conducted pilot actions with cooperating long-term care facilities to explore how digital solutions can be effectively implemented and tested in real settings. Feedback from management, professionals, and end-users continuously refined and guided the process.

Hello Mirror: support tool for nursing homes



A tool to engage residents in activities. The so-called “Health Mirror“ is an interactive touchscreen that offers digital content to help older people stay mentally and physically fit. For both group and individual sessions, it offers carers a variety of options for conducting exercises with residents in the areas of strength training, fall prevention, reality orientation, memory development, and music therapy. The mirror is on wheels and can therefore also be used to care for bedridden residents.

Lessons learned

- > **Define and prioritise needs:** Start with a clear overview of what’s needed and in what order.
- > **Build a team of champions:** Appoint key staff as digital consultants and ambassadors.
- > **Make time for practice:** Schedule regular sessions to explore the tool and content updates.
- > **Support peer learning:** Encourage colleagues to guide and learn from one another.
- > **Start small, grow steadily:** Introduce features step by step to avoid overwhelming staff or residents.
- > **Stay connected:** Keep testing, observing, asking questions, and improving together.
- > **Highlight successful adoption:** Share positive examples and outcomes to build confidence and encourage wider use.
- > **Set clear expectations:** Be open about the technology’s future, including potential constraints or changes.





Streamlining Care with ilvi: A Digital Leap for Nursing Staff



To further improve digital nursing documentation, the ilvi solution was enhanced with new features tailored to everyday care needs. Ilvi combines a mobile device with software that connects to medical equipment, allowing vital signs to be transferred automatically to the hospital information system. In the pilot, ilvi was expanded with two new features: digital wound documentation and document scanning using the device's camera. These additions were developed to simplify daily routines and empower nursing staff to document directly at the point of care. The goal: less paperwork, more accurate data and greater efficiency - giving caregivers more time to focus on the needs of residents.

Lessons learned

- > **Start with market research:** Explore the market, compare solutions with defined criteria, and learn from best practices.
- > **Decide together:** Involve care staff, technical partners, and management in a co-creative decision-making process.
- > **Test before rollout:** Run thorough pre-tests to spot technical issues early on.



- > **Support digital skills:** Check digital readiness and offer hands-on training.
- > **Connect to what already works:** Integrate new tools with existing systems (e.g. hospital information system) to reduce duplication and save time.
- > **Make it easy to use:** Prioritise intuitive design that works for all levels of digital experience.
- > **Tailor it to your needs:** Enable early customisation to reflect real-world workflows.
- > **Stay close to the users:** Provide ongoing support with regular site visits and a responsive help desk.
- > **Listen and adapt:** Set up clear feedback channels to continuously improve the solution.
- > **Keep it realistic:** Align planning with available time, people, and resources on the ground.
- > **Test focused, learn big:** Use compact, focused pilots with motivated teams to get meaningful results.

From Detection to Prevention: A New Era of Fall Safety



A sensor technology in the field of fall prevention and detection was pilot tested. There are 3D smart sensors installed at the top of the residents' rooms. Nursing staff can set different modules for each resident. The modules are fall detection, fall prevention and absence detection. The sensor is connected to the nurse call system. It uses infrared technology that analyses movement in a room. If a critical situation occurs, the nurses receive an alarm and can check promptly if the resident needs help.

Lessons learned

- > **Involving everyone early makes a big difference:** Ensure that both end-users and management are included early in the process to build ownership and increase project success.
- > **Training and support increase user confidence:** Offer hands-on training and easy-to-access support to help users feel confident and capable when using the digital solution.
- > **Clear communication avoids confusion:** Encourage regular dialogue between different levels of the organisation to align expectations and address concerns quickly.

CogvisAI 3D-Smartsensor



- > **Flexibility of the system is important:** Choose or develop systems that can adapt to local needs and workflows in different settings.
- > **Data protection builds trust:** Build trust by clearly communicating how data is stored, used, and protected according to legal and ethical standards.
- > **Easy-to-use tools are more accepted:** Make sure the system is intuitive and fits smoothly into daily routines to encourage consistent use.
- > **The solution must fit with organizational goals:** Ensure the digital tool directly supports strategic priorities to gain leadership support and long-term relevance.
- > **Ongoing feedback helps improve the system:** Set up simple ways to gather user feedback and use it to improve the system throughout the implementation process.



From Paper to Platform: Streamlining Care Workflows with SharePoint



TECHNICAL UNIVERSITY
OF KOŠICE

A digital coordination platform was pilot tested at ARCUS, the largest provider of long-term care in Eastern Slovakia. Based on Microsoft SharePoint, the solution replaced paper-based records with digital tools for scheduling, medication tracking, documentation, and communication. The system was designed and configured in close cooperation with staff, ensuring high usability and alignment with real-life workflows. The implementation significantly improved transparency, efficiency, and staff satisfaction, with strong support from regional stakeholders enabling future scaling.

Lessons learned

- > **Staff-driven innovation boosts ownership:** The pilot was initiated by facility staff, which fostered strong engagement and smooth adoption.
- > **Training must reflect diverse digital literacy levels:** A mix of manuals, workshops, and peer support helped overcome resistance, especially among older staff.
- > **Flexibility in system configuration is key:** SharePoint allowed rapid adaptation to existing routines and local needs, minimising disruption.
- > **Institutional partnerships strengthen sustainability:** Free licensing support from the Košice Self-Governing Region removed financial barriers for wider implementation.
- > **Ongoing support enables continuous improvement:** In-house IT expertise allowed quick system refinements based on user feedback.





Stepping into the Future: VR and AR for Supporting Older Adults



VIA CARPATIA
EGTC

The pilot focused on testing a solution that used virtual and augmented reality to support therapeutic activities for older adults. It also included training for staff in care facilities on how to work with new technologies, particularly those based on VR and AR.

Lessons learned

- > **Involve real users:** Care staff were key in shaping practical and accepted solutions.
- > **Focus on night shifts:** Smart monitoring reduced the burden where staff shortages were most critical.
- > **Stimulate the mind, not just the body:** VR technology helped improve clients' moods and cognitive activity.
- > **Co-create and adapt:** Regular feedback led to meaningful technical adjustments.
- > **Test in real environments:** Piloting directly in care facilities revealed real benefits and limitations.
- > **Combine human care with technology:** Innovations support but do not replace personal contact.
- > **Bring together diverse expertise:** Success came from combining social, academic, and technological perspectives.
- > **Think about sustainability:** Institutional support is essential for the long-term use of good solutions.



From Sensors to Petbots: Digital Tools for Better Care



**CZECH INSTITUTE
OF INFORMATICS
AND
ROBOTICS AND
CYBERNETICS
CTU IN PRAGUE**

The Czech Institute of Informatics tested three digital tools to improve care: environmental sensors for fall and motion detection, cognitive tablet games for mental stimulation, and a prototype robotic “petbot” for companionship and reminders. The solutions were trailed in collaboration with care staff and aimed at improving resident safety, cognitive health, and overall engagement. Staff reported high satisfaction with the cognitive games, moderate trust in the petbot, and generally positive communication with the technology providers. While the tools showed promise, their adoption was limited by inconsistent training, minor technical issues, and uncertainty regarding data protection policies.

Lessons learned

- > **User-friendly tools enhance engagement:** Simple, interactive games were well received by residents and supported active participation from staff.
- > **Preparation and training must be structured:** Limited or informal training left some users unsure about proper usage, especially with new or experimental tools.
- > **Iterative testing builds trust:** Gradual rollouts with feedback loops helped staff understand the technologies and adapt them to daily routines.
- > **System reliability matters for confidence:** Minor technical issues and unclear repair processes reduced trust in some components, especially the petbot.
- > **Clear communication on data security is essential:** Many users were unaware of the implemented data protection measures, highlighting a need for better internal communication.
- > **Strong vendor cooperation supports smoother rollout:** Responsive, open communication with technology providers improved problem-solving and acceptance.





Caring Smarter: Real-Time Monitoring for Safer Dementia Units



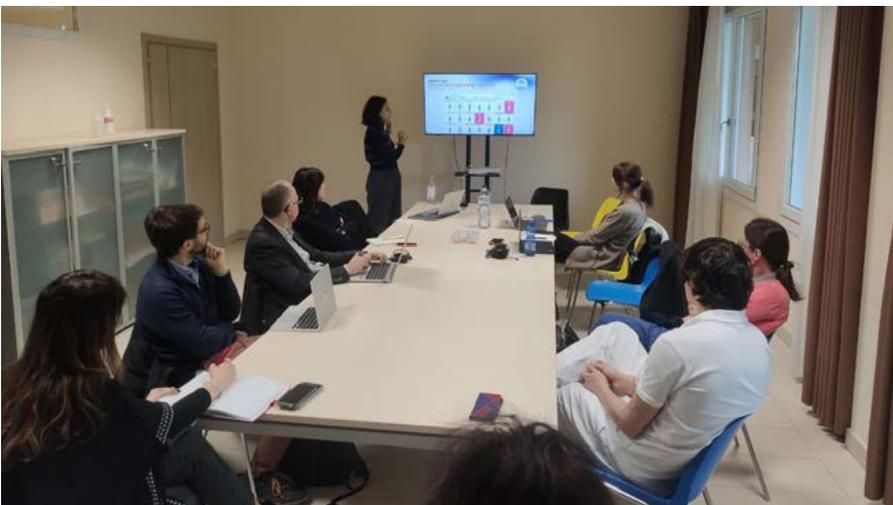
The pilot tested the ANCELIA solution developed by TeiaCare in a care unit dedicated to 32 women with moderate to severe dementia. The goal was to support the care staff, particularly during night shifts, while

providing managers with objective data to assess care quality.

The technology consist of several components:

- > An optical sensor integrated with an AI algorithm that automatically collects data on the resident's condition (e.g., fall risk, presence or absence in bed or the room, body posture, etc.).
- > The Carer App, which sends real-time notifications when a resident requires immediate and targeted intervention.
- > The Manager App, which generates reports on residents' conditions and care interventions, enabling managers to base decisions on objective data.

The AI-driven technology enables the customisation of alert and monitoring systems, preventing falls and offering valuable insights into residents' habits to facilitate personalised care while optimising staff time. Moreover, it provides retrospective data on residents' conditions and routines, as well as analytics on interventions, alerts, and response time, enhancing the overall quality of care.



Lessons learned

- > **Early Staff Involvement:** Engaging staff from the start improves adoption, reduces resistance, and ensures smoother integration.
- > **Clear Communication with Families:** Providing transparent information about the technology builds trust and eases concerns.
- > **Ongoing Feedback is Key:** Regular meetings with staff and care coordinators help refine implementation and maintain motivation.
- > **Strong On-Site Leadership:** A dedicated manager encourages adoption, supports staff, and drives engagement.
- > **Gradual Adaptation is Necessary:** A transition period helps staff adjust and minimises initial stress.
- > **Staff Turnover Slows Adoption:** High turnover affects learning; structured training programs help new staff adapt faster.



Smarter Rehabilitation: Real-Time Insights with DC Analytics



The pilot focused on developing and implementing the DC Analytics system to streamline management processes and the flow of information within the rehabilitation sector. The system, developed using Progressive Web App (PWA) technology,

was installed on tablets and smartphones, providing staff with quick access to securely stored data. It can also be integrated with the facility's existing system. By improving information flow, enabling real-time monitoring, and enhancing care coordination, DC Analytics facilitates continuous assessment of patient rehabilitation progress, supports feedback sharing, and generates advanced reports for managers to aid decision-making. Optimising resources and processes ultimately enhances operational efficiency and improves the quality of patient care.

Lessons learned

- > **Involve all stakeholders from the beginning**
Include management, specialists (e.g., physiotherapists), end users, and external service providers in the process from the start.
- > **Conduct a needs analysis**
Before starting the implementation, carefully identify which areas need improvement and what problems need to be solved.

- > **Choose the right technology**
Opt for flexible and scalable solutions, like PWA (Progressive Web App), which work on both computers and mobile devices, can be installed directly from the browser, and work offline.
- > **Integrate with existing systems**
The new solution should be compatible with current systems to avoid data duplication and improve the team's daily workflow.
- > **Test with real users**
Deploy a prototype and test it with real users (physiotherapists, managers) to quickly identify issues and adjust features to real-world conditions.
- > **Provide training and support**
Prepare users for working with the new solution through training, instructions, and technical support to ensure a smooth start.
- > **Monitor implementation results**
Set performance indicators and gather feedback to continuously improve the system.
- > **Focus on operational benefits**
Better information flow, real-time insight into patient progress, easy access to decision-support data, and increased satisfaction for both staff and patients.
- > **Implement in stages and plan for growth**
Start with a pilot project. Testing on a smaller scale allows for gradual changes and better planning for future investments (e.g., equipment purchases, and system expansion).
- > **Prioritize user convenience**
Intuitive operation, quick access to data, and real support in daily tasks are key to a successful and sustainable implementation.



Digitalising your long-term care facility step by step

Every transformation starts with an idea—an idea that something could be or should be different. The DigiCare4CE project provides structured guidance for care facility managers, supporting them step by step through the digital transformation process. With our tools, you will be able to assess, plan, and implement digital innovations in your care facility with confidence.

Each tool below comes with practical resources that will help you navigate this journey.



1 Go through the DigiCare4CE Model

Why it matters: Understand where your facility stands in terms of digital equipment and readiness. This reference framework helps define different levels of digital adoption in long-term care facilities, allowing you to compare your progress with industry benchmarks.



2 Open the DigiCare4CE Online Check

Why it matters: Use this interactive online tool to assess your facility's current digitalisation status. The results will highlight areas for improvement and suggest possible next steps.



3 Get inspired by Transnational Practitioners Guides

Why it matters: Get real-world insights from care facilities that have successfully adopted digital solutions. These checklists contain practical case studies on integrating digital technologies into daily care, highlighting potential pitfalls during the digitalisation process.

Practitioner Guide Pilot Action 1
Practitioner Guide Pilot Action 2



4 Explore our regional Innovation Plans for inspiration

Why it matters: Practical ideas and recommendations for introducing new technologies in long-term care. These plans offer guidance, highlight opportunities, and share lessons learned to support providers in making their digital transformation more effective and sustainable.

Get started today!

Visit our website to access all tools and resources.

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