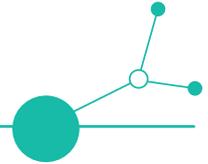


## D.2.4.2 Jointly developed final territorial action plans of territorial Health Labs4Value Hungary





## 1. Executive summary

The Health Labs4Value action plan is a three-year strategic initiative aimed at improving Hungary's healthcare situation by promoting innovation, optimizing healthcare processes, and strengthening international cooperation. The plan responds to critical challenges such as healthcare system inefficiencies, the need for digital transformation, and the growing demand for patient-centred care. By leveraging digital health solutions and international best practices, the action plan seeks to enhance service quality, accessibility, and overall healthcare efficiency.

### Purpose and objectives

This action plan is designed to drive systemic improvements in Hungary's healthcare sector by focusing on four key objectives:

- **Optimizing in-patient and out-patient care processes** - Streamlining healthcare delivery by integrating digital tools, automating administrative tasks, and improving workflow efficiency.
- **Promoting the development and adoption of innovative healthcare solutions** - Supporting healthcare start-ups, facilitating research and development, and creating an ecosystem for digital health innovations.
- **Increasing patient satisfaction** - Enhancing the patient experience by improving communication, reducing waiting times, and implementing feedback-driven improvements.
- **Strengthening international cooperation and knowledge exchange** - Encouraging cross-border collaboration, sharing best practices, and integrating international expertise into Hungary's healthcare framework.

### Implementation framework

To achieve these objectives, the action plan outlines a structured set of activities, each assigned a timeline, milestones, resource requirements, expected impacts, and measurable outcome indicators. The plan ensures that healthcare innovations are effectively developed, tested, and integrated into the system through a coordinated approach.

The action plan also establishes a clear framework for stakeholder involvement by defining their roles, responsibilities, and levels of engagement. Effective cooperation between healthcare providers, policymakers, researchers, and innovators is essential for the success of this initiative. The plan provides mechanisms to facilitate this collaboration and ensure all stakeholders are aligned toward the common goal of healthcare transformation.

### Risk management and monitoring

A risk assessment framework is incorporated into the action plan to anticipate and mitigate potential challenges. This involves identifying possible obstacles such as funding shortages, regulatory barriers, and data security concerns, assessing their likelihood, and proposing preventive measures. By proactively addressing these risks, the plan ensures smooth implementation and sustainable progress.



In addition, the action plan introduces a monitoring and evaluation mechanism to measure the effectiveness of implemented actions. Clear key performance indicators (KPIs) will track progress, ensuring continuous assessment and adjustments where needed. The plan also establishes data collection and reporting processes to provide transparent insights into the results achieved.

## 2. Introduction

### 2.1. Brief overview of Health Labs4Value initiative

The Health Labs4Value initiative is aimed at improving healthcare systems across Central Europe through innovation, collaboration, and knowledge sharing.

**Vision and mission:** The initiative seeks to create an innovative and sustainable healthcare ecosystem across Central Europe by fostering collaboration among academia, healthcare providers, start-ups, industry leaders, and public institutions.

**Geographical scope:** The project encompasses six Central European countries: Austria, Czech Republic, Germany, Hungary, Poland and Slovenia.

**Key approach:** Health Labs4Value utilizes a "Living Labs" methodology, establishing decentralized hubs in each participating country for testing and validating healthcare innovations in real-world settings. These Living Labs are designed as user-centered, open innovation ecosystems, integrating research and innovation processes with the everyday lives of citizens. This allows for innovations to be developed and tested collaboratively, ensuring they are relevant, accessible, and meet the real-world needs of both healthcare providers and patients. By operating within diverse community settings, these Living Labs offer a flexible and adaptable approach to healthcare innovation, fostering rapid prototyping, user feedback integration, and the scaling of successful solutions.

### 2.2. Purpose and scope of the action plan

This action plan outlines a concrete roadmap for a three-year timeframe to leverage and enhance the Hungarian Living Lab within the Health Labs4Value initiative. Activities will involve a diverse group of stakeholders—healthcare providers, health technology companies, government agencies, patient groups, academic institutions, and SMEs—located across Hungary. The actions address in-patient and out-patient care processes, innovation development, patient satisfaction, and international knowledge exchange.

The underpinning theory of change is that coordinated, targeted actions—such as digitalizing patient management, integrating patient feedback, and fostering cross-border innovations—will strengthen system components and empower actors across the healthcare landscape. By systematically building capacity, piloting new tools, and sharing knowledge, the plan anticipates measurable improvements in process



efficiency, patient experience, and stakeholder collaboration, setting the path for broader transformation.

### 3. Local context analysis

#### 3.1. Current healthcare landscape

The current healthcare landscape in Hungary presents a complex picture with both notable strengths and significant challenges. Hungary operates a tax-funded universal healthcare system. While the system aims to provide comprehensive coverage, it faces several pressing issues that impact the quality and accessibility of care.

Hungary's healthcare system is characterised by a mix of public and private provision, with the public sector playing a dominant role. The system has undergone significant changes in recent years, but it has to persistent challenges. Main characteristics:

- **Universal coverage:** The system provides coverage to 100% of the population, with healthcare being free for children, students, pensioners, and low-income individuals.
- **Funding challenges:** Hungary spends about 6,7% of its GDP on healthcare, which is lower than many other European countries. This underfunding has led to issues with infrastructure, staffing, and service quality.
- **Centralisation:** Recent years have seen increased centralisation of healthcare management, which has led to concerns about reduced local autonomy and flexibility in healthcare provision.
- **Digital health advancements:** Hungary has been making strides in implementing digital health solutions, including telemedicine and electronic health records, though integration challenges remain.

#### Key strengths:

- **Affordable care:** Healthcare services in Hungary are generally more affordable compared to Western European countries. This has made Hungary a popular destination for medical tourism, particularly in dentistry and elective procedures.
- **Improving life expectancy:** Despite challenges, life expectancy has been increasing, with gains of 5,24 years for men and 3,12 years for women between 2001 and 2023.
- **Medical tourism:** Hungary has become a leading destination for medical tourism, particularly in dental care, cosmetic surgery, and spa treatments.

#### Key weaknesses:

- **Underfunding:** The healthcare system is chronically underfunded, with per capita spending at about half the EU average. This leads to issues with infrastructure, equipment, and staff in.
- **Workforce challenges:** There is a significant shortage of healthcare professionals, particularly in rural areas. Many doctors and nurses are leaving the country for better opportunities abroad, exacerbating the staffing crisis.



- Aging infrastructure: Many hospitals and healthcare facilities are outdated and in need of renovation or replacement.
- Long waiting times: Patients often face long waiting times for various treatments and procedures, particularly for specialist care.
- Regional disparities: There are significant disparities in healthcare access and quality between urban and rural areas, with rural regions often underserved.
- Preventable mortality: Hungary ranks poorly in the EU for preventable and avoidable deaths, indicating issues with both preventive care and treatment effectiveness.
- Hospital debt: Many hospitals are struggling with significant debt, which impacts their ability to provide services and maintain equipment.

### 3.2. Key challenges and opportunities

Hungary's healthcare system faces several significant challenges, but these also present opportunities for innovation and improvement.

Key challenges:

- Ageing healthcare workforce: A significant portion of Hungarian doctors are approaching retirement age, with one in five nearing the end of their careers.
- Brain drain: Many younger doctors are choosing to work abroad, exacerbating the shortage of medical professionals.
- Hospital closures and service reductions: Due to staffing shortages, many hospital wards and services are being suspended or closed.
- Underfunding: Hungary's public health spending is significantly lower than the EU average.
- Excessive reliance on hospital care: The system often results in avoidable admissions for services better suited to outpatient settings.
- Long waiting lists: Some surgeries have waiting times of up to 6 years and 9 months.
- Centralisation issues: The centralization of the public healthcare system has undermined important checks and balances on the quality of care.
- Lack of independent oversight: There is insufficient independent monitoring of hospital-acquired infections and other quality indicators.
- Infrastructure challenges: Many healthcare facilities are outdated and in need of renovation.

Opportunities for innovation and improvement:

- Digital health expansion: Hungary has been making strides in implementing digital health solutions, including telemedicine and electronic health records. There's an opportunity to further develop and integrate these technologies.



- **AI and data-driven healthcare:** The centralisation of hospital information systems aims to standardize data management and foster interoperability, enabling the creation of structured datasets for AI processing.
- **Health innovation ecosystem:** Over 90 Hungarian SMEs have recently showcased healthcare innovations on the international stage, indicating a growing innovation sector.
- **Research and development:** Hungary has opportunities to leverage its centralized healthcare data for research and improvement of patient outcomes.
- **Preventive care enhancement:** Hungary has shown strengths in prevention through screening and vaccination programs, which can be further expanded.
- **EU funding opportunities:** As an EU member state, Hungary can access various funding schemes for healthcare improvement and innovation.
- **Cross-border collaboration:** There's potential for expanding collaboration within the Central and Eastern European region to drive innovation and improve patient care.

### 3.3. SWOT analysis

Strengths	Weaknesses
Centralized healthcare data system providing unique opportunities for research and innovation.	Chronically underfunded public healthcare system.
Strong prevention programs, particularly in screening and vaccination.	High out-of-pocket spending (27% vs 16% EU average).
Successful implementation of digital health solutions and telemedicine.	Shortage of healthcare professionals, especially in rural areas.
Established network of Living Labs across multiple countries.	Aging healthcare infrastructure and equipment.
Transnational cooperation framework through Health Labs4Value project.	Lack of independent oversight on hospital-acquired infections.
Improved remuneration for healthcare professionals in recent years.	Centralization has undermined checks and balances on quality of care.
Opportunities	Threats
Leveraging centralized data for AI and machine learning applications in healthcare.	Aging population increasing demand on healthcare services.
Expanding cross-border collaboration, especially within Central and Eastern Europe.	Brain drain of skilled healthcare workers to other countries.
Implementing value-based healthcare principles through Living Labs.	Cybersecurity risks associated with increased digitalization.
Developing patient-oriented digital solutions through co-creation in Living Labs.	Regulatory hurdles slowing down innovation adoption.



Improving efficiency and reducing costs through digital health technologies.	Resistance to change among healthcare professionals and patients.
Attracting EU funding for healthcare innovation projects.	Widening health disparities between urban and rural areas.

## 4. Pilot experience

### 4.1. Brief summary of the pilot activity

The Hungarian pilot, part of the Health Labs4Value project, aimed to develop and test an integrated patient management system tailored for private hospitals within the TritonLife Group. Central to the methodology was the Living Lab approach, which placed co-creation and real-world validation at the heart of the innovation process.

The pilot began with a thorough needs assessment, using focus groups, Open Camp events, and personal interviews to involve patients, relatives, administrative staff, and healthcare professionals.

The co-design phase featured iterative development with continuous stakeholder feedback. Separate PREMs and staff questionnaires were administered to capture both patient and professional perspectives on administrative workflows. Insights revealed key pain points: fragmented, manual processes (e.g., Excel-based scheduling, e-mail document exchanges) leading to inefficiency and errors.

The pilot tested a custom-developed software prototype designed for local regulation compliance and integration with existing hospital infrastructure. Core modules—role-based access, surgical scheduling, quote generation, financial documentation—were developed and refined through iterative focus group input and internal staff testing. Real-world usability was validated in two rounds of Open Camps (Budapest and Kaposvár), using simulated patient journeys and bug-reporting mechanisms.

Results showed high anticipated improvements in scheduling, administrative burden reduction, and information transparency. The methodological sequence—from qualitative input through PREM/PROM surveys to real-world simulation—ensured robust, user-centred validation, laying the groundwork for phased implementation and continual enhancement within the TritonLife hospital network.

### 4.2. Experience gained from the pilot activity

The Hungarian Health Labs4Value pilot yielded rich insights into both technical and organisational dimensions of digital healthcare transformation. Key learnings centred on the necessity of user-centred, co-creation methodologies: engaging diverse stakeholder groups—patients, relatives, and staff—through focus groups and Open Camp events was critical for mapping real pain points, especially around complex surgical administration.



The pilot demonstrated that targeted recruitment, coupled with strong internal leadership support, facilitated both participation and ownership, while clarifying that incentives (like treatment vouchers) are sometimes vital to motivate patient involvement.

Process-wise, piloting in real-world Health Living Labs highlighted that integrating feedback from both patient-reported experiences (PREMs) and staff/user bug reports allows for iterative refinement, not only rooting out software bugs but also surfacing workflow and information clarity issues. The phased development validated the wisdom in optimising internal administrative efficiency before attempting patient-facing digital expansion.

Ultimately, the Living Labs approach drove effective collaboration, rapid iteration, and a shared sense of ownership across clinical, administrative, and technical groups.

### 4.3. Impact of the pilot activity on the action plan

The pilot's findings directly informed and strengthened the structure and priorities of the Hungarian action plan under Health Labs4Value. Practical experiences validated the action plan's emphasis on phased, stakeholder-driven innovation—first focusing on optimising internal processes with digital tools, then expanding to patient-facing interfaces. The realisation that targeted, structured co-creation yields more actionable feedback led to embedding participatory mechanisms (like regular focus groups and surveys) as key activities in the plan. The challenges encountered—difficulty in patient recruitment, gender and age imbalances, and the need for multidisciplinary communication—prompted the action plan to prioritise diverse, inclusive engagement strategies and ongoing communication efforts.

The pilot's results underscored the necessity of robust monitoring and evaluation frameworks, as reflected in the action plan's focus on KPIs, feedback loops, and adaptability. Lessons on change management and data security in the pilot reinforced the action plan's provisions for comprehensive staff training and strict adherence to regulatory requirements. The pilot's demonstration of efficiency gains—reduced administrative burden, clearer communication, and increased satisfaction—cemented the business case for scaling the digital patient management solution network-wide, with strategic investment and sustainability built into the plan.

Furthermore, the pilot revealed strong patient and staff demand for truly integrated care; in response, the action plan specifically includes the "further development of the digital patient management system developed in the Health Labs4Value project with a patient-side interface" as a high-priority activity. By formalizing this activity, the action plan moves beyond internal operational efficiencies and positions the Hungarian healthcare system at the forefront of digital patient empowerment, reflecting the evolving needs and expectations mapped through the Living Lab methodology.



## 5. Strategic objectives and priorities

### 5.1. Localised priorities based on regional needs

Based on the local context analysis, the identified key priorities addressing regional needs:

1. Optimising in-patient and out-patient care processes
2. Promoting the development of innovative solutions
3. Increasing patient satisfaction
4. Strengthening international cooperation and exchange of experience

These priorities directly address the challenges identified in the Hungarian healthcare system, including inefficient hospital-centric care, the need for digital transformation, and the importance of improving patient experiences and outcomes. Additionally, the plan recognizes the importance of workforce development as a foundation for sustained innovation and resilience. While this is addressed through specific training and awareness-raising activities, the plan will also initiate the design of a structured, long-term upskilling and professional development strategy to ensure that healthcare professionals are equipped to adapt to ongoing digital and systemic changes.

### 5.2. Alignment with Health Labs4Value strategic objectives

Alignment with Health Labs4Value strategic objectives:

#### **Optimizing in-patient and out-patient care processes**

This priority aligns with the Health Labs4Value objective of advancing digital health solutions and streamlining technology adoption. It aims to optimize in-patient and out-patient care processes, including medical check-ups and pre/post-operative procedures, through automation and innovative digital systems. This addresses the local challenge of inefficient hospital-centric care while contributing to the broader goal of improving healthcare efficiency and patient experience across Central Europe.

#### **Promoting the development of innovative solutions**

This priority connects to the Health Labs4Value objective of fostering regional and international innovation ecosystems. By focusing on developing innovative solutions, it can contribute to the transnational goal of creating a robust healthcare innovation landscape. This aligns with the initiative's aim to facilitate access to resources, funding, and networks to scale impactful solutions.



### Increasing patient satisfaction

This priority aligns with the Health Labs4Value objectives of expanding preventive healthcare and enhancing patient-centred care. By focusing on increasing patient satisfaction, it addresses its local need for improved healthcare experiences while contributing to the broader goal of shifting towards more personalized and patient-centred care models across participating regions.

### Strengthening international cooperation and exchange of experience

This priority directly supports the Health Labs4Value objective of foster regional and international innovation ecosystems. By emphasizing international cooperation and knowledge exchange, it contributes to the transnational goal of building robust partnerships among academia, healthcare providers, start-ups, industry leaders, and public institutions. This aligns with the initiative's focus on creating a unified, innovative, and sustainable healthcare ecosystem across participating regions.

## 6. Proposed activities and interventions

### 6.1. Activities to support the implementation of Priority 1. Optimising in-patient and out-patient care processes

#### 6.1.1. Activity 1. Further development of the digital patient management system developed in the Health Labs4Value project with a patient-side interface

##### Description:

Enhance the existing digital patient management system developed in the Health Labs4Value project by adding a user-friendly patient-side interface. This will allow patients to actively engage with their care plans, schedule appointments, access medical records, and communicate with healthcare providers. The platform will utilise cloud services powered wherever possible by renewable energy, ensure software is optimised to minimise computational demand, and prioritise sustainable procurement of IT equipment.

##### Timeline and milestones

- Months 1-3: Requirements gathering and system design
- Months 4-6: Development of patient interface
- Months 7-8: Integration with existing system and testing
- Month 9: Pilot launch in selected healthcare facilities
- Months 10-12: Evaluation and refinement

##### Resource requirements (human, financial, technological)

- Human: Software developers, UX/UI designers, project manager, healthcare IT specialists
- Financial: Estimated budget of €75,000 - €125,000



- Technological: Cloud infrastructure, mobile app development tools, secure data storage systems

### Expected outcomes and impact

- Improved patient engagement and satisfaction
- Reduced administrative burden on healthcare staff
- Enhanced care coordination and communication between patients and providers
- Increased efficiency in appointment scheduling and resource allocation

### Key performance indicators (KPIs)

- Patient adoption rate of the new interface (target: 60% within first year)
- Reduction in missed appointments (target: 25% decrease)
- Patient satisfaction scores (target: 15% increase)
- Time saved by administrative staff (target: 20% reduction in scheduling-related tasks)

## 6.1.2. Activity 2. Shaping the patients' perception of in-patient and out-patient care processes

### Description

Develop and implement a comprehensive communication strategy to educate patients about in-patient and out-patient care processes, emphasising the benefits of the optimised system and addressing common concerns or misconceptions. Incorporate digital resources and eco-friendly materials to minimise paper waste, and promote sustainable practices within patient communications wherever possible.

### Timeline and milestones

- Months 1: Research patient perceptions and identify key areas for improvement
- Months 2-3: Develop communication materials and strategy
- Month 4: Train healthcare staff on new communication approach
- Months 5-8: Implement communication campaign across various channels
- Months 9: Evaluate impact and refine strategy

### Resource requirements (human, financial, technological)

- Human: Communication specialists, graphic designers, healthcare educators, patient advocates
- Financial: Estimated budget of €15,000 - €20,000
- Technological: Digital marketing tools, survey platforms, content management systems

### Expected outcomes and impact

- Increased patient understanding of care processes
- Reduced anxiety and improved patient experience
- Higher levels of patient cooperation and adherence to treatment plans
- Improved public perception of healthcare services



### Key performance indicators (KPIs)

- Patient knowledge scores on care processes (target: 30% improvement)
- Patient-reported experience measures (PREMs) scores (target: 20% increase)
- Reduction in patient complaints related to process misunderstandings (target: 30% decrease)
- Social media engagement with educational content (target: 5,000 interactions per month)

### 6.1.3. Activity 3. Awareness raising of healthcare workers in-patient and out-patient care processes

#### Description

Develop and implement a comprehensive training program for healthcare workers to increase their awareness and understanding of optimized in-patient and out-patient care processes, focusing on efficiency, patient-centeredness, and the use of new digital tools.

#### Timeline and milestones

- Months 1: Assess current knowledge gaps and training needs
- Months 2-3: Develop training materials and modules
- Months 4-6: Roll out training program across all relevant healthcare facilities
- Months 7: Evaluate training effectiveness and make necessary adjustments

#### Resource requirements (human, financial, technological)

- Human: Healthcare educators, process improvement specialists, e-learning developers, project coordinator
- Financial: Estimated budget of €10,000 - €15,000
- Technological: Learning management system, video conferencing tools, process simulation software

#### Expected outcomes and impact

- Improved efficiency in care delivery
- Enhanced collaboration between different healthcare departments
- Reduced errors and improved patient safety
- Increased job satisfaction among healthcare workers

#### Key performance indicators (KPIs)

- Percentage of staff completing the training program (target: 70% within first year)
- **Improvement** in process efficiency metrics (target: 20% reduction in average patient wait times)
- Staff satisfaction scores (target: 25% increase)
- Reduction in process-related errors (target: 30% decrease)



## 6.2. Activities to support the implementation of Priority 2. Promoting the development of innovative solutions

### 6.2.1. Activity 1. Organising regular annual innovation days for SMEs carrying out healthcare development and interested healthcare institutions.

#### Description

Annual events designed to bring together SMEs, healthcare institutions, researchers, and investors to showcase innovative solutions, network, and foster collaborations.

#### Timeline and milestones

- Months 1-3: Planning and Venue Selection.
- Months 4-6: Promotion and Participant Recruitment.
- Month 7: Securing Speakers and Content.
- Month 8: Final Preparations.
- Month 9: Execution of Innovation Day.
- Months 10-12: Follow-Up, feedback gathering, and planning for next year.

#### Resource requirements (human, financial, technological)

- Human: Event management team, marketing personnel, speakers, facilitators.
- Financial: Venue rental, marketing and advertising costs, speaker fees, catering, administrative costs. €10,000-€15,000 per event
- Technological: Event management software, presentation equipment, online registration platform.

#### Expected outcomes and impact

- Increased collaboration between SMEs and healthcare institutions.
- Enhanced visibility for innovative healthcare solutions.
- Facilitated investment and partnerships for SMEs.
- Increased awareness of innovative healthcare practices among stakeholders.

#### Key performance indicators (KPIs)

- Number of attendees (Target: 50+).
- Number of SMEs participating (Target: 25+).
- Feedback satisfaction score from attendees (Target: 4/5).

### 6.2.2. Activity 2. Support the creation of testing spaces.

#### Description

Establish or support the creation of designated testing spaces (e.g., Living Labs, simulation centers) where healthcare innovations can be evaluated in real-world or simulated environments. All newly established or supported testing spaces (e.g. Living Labs, simulation centers) will adhere to green building principles.

#### Timeline and milestones

- Months 1-5: Identify potential locations and partners for testing spaces.
- Months 5-9: Develop operational guidelines and infrastructure requirements.



- Months 9-15: Secure funding and resources for establishing the testing spaces.
- Months 16-36: Launch and operationalize the testing spaces, initiate pilot projects.

#### **Resource requirements (human, financial, technological)**

- Human: Project managers, technical experts, healthcare professionals, researchers.
- Financial: Facility rental or construction costs, equipment purchases, personnel costs, operational expenses. €100,000-€150.000 per testing space.
- Technological: Simulation software, data collection and analysis tools

#### **Expected outcomes and impact**

- Increased availability of testing facilities for healthcare innovations.
- Improved quality and reliability of evaluation data.
- Accelerated development and adoption of effective solutions.
- Enhanced collaboration between innovators and end-users.

#### **Key performance indicators (KPIs)**

- Number of testing spaces established (Target: min 1).
- Number of innovations tested in these spaces (Target: 1+ per year).
- Stakeholder satisfaction with the testing process (Target: 4/5).

### **6.2.3. Activity 3. Establish a cross-border information base for the dissemination of health innovations.**

#### **Description**

Creation of an online platform or repository that serves as a central hub for sharing information about healthcare innovations, best practices, and success stories across borders.

#### **Timeline and milestones**

- Months 1-3: Define platform requirements and content strategy.
- Months 4-6: Develop the information base, including design, structure, and functionality.
- Month 7-8: Populate the platform with initial content.
- Month 9: Launch the platform.
- Months 10-12: Promote the information base, gather feedback, and continuously update content.

#### **Resource requirements (human, financial, technological)**

- Human: Web developers, content creators, database managers, marketing staff.
- Financial: Website development and hosting costs, content creation expenses, marketing and outreach budget. (€10,000 - €30,000)
- Technological: Content management system, database software, translation tools.

#### **Expected outcomes and impact**

- Increased awareness of innovative healthcare solutions.
- Facilitated knowledge transfer and best practice sharing across borders.



- Reduced duplication of efforts and resources.
- Enhanced collaboration and networking among stakeholders.

#### Key performance indicators (KPIs)

- Number of unique visitors to the platform (Target: 1,000+ per year).
- Number of resources (innovations, best practices) shared on the platform (Target: 10+/year).
- Geographical reach of the platform (Target: Users from 8+ countries).

### 6.3. Activities to support the implementation of Priority 3. Increasing patient satisfaction

#### 6.3.1. Activity 1. Implement patient feedback system and analysis

##### Description

Develop a systematic way to collect and analyse patient feedback at all points of contact (e.g. surveys, online reviews, focus groups). Use this data to identify areas for improvement and monitor progress in improving patient satisfaction.

##### Timeline and milestones

- Months 1-9: Design and pilot feedback collection methods.
- Months 9-12: Implement system-wide data collection.
- Months 12-15: Analyze data and identify key improvement areas.

##### Resource requirements (human, financial, technological)

- Human: Patient experience coordinator, data analysts, healthcare staff for implementation.
- Financial: Survey software, data analysis tools, potential incentives for feedback participation. (Estimated: €10,000-€20,000)
- Technological: Secure online survey platform, data analytics software.

##### Expected outcomes and impact

- Improved understanding of patient needs and preferences.
- Increased patient engagement in the improvement process.
- Data-driven decisions for enhancing the patient experience.
- Demonstrable improvements in patient satisfaction scores.

##### Key performance indicators (KPIs)

- Response rate for patient feedback surveys (Target: 30%+)
- Patient satisfaction scores (Target: 10% increase year-over-year)
- Number of actionable insights derived from patient feedback (Target: 5+ per year)



### 6.3.2. Activity 2. Develop patient-centred communication training for staff

#### Description

Creation and implementation of a training program for all healthcare staff focused on effective communication techniques that enhance patient understanding, empathy, and trust.

#### Timeline and milestones

- Months 1-2: Conduct needs assessment and develop training curriculum.
- Months 3-4: Pilot training program with a select group of staff.
- Months 5-9: Roll out training program to all relevant personnel.
- Months 10-12: Evaluate training effectiveness and refine curriculum.

#### Resource requirements (human, financial, technological)

- Human: Training specialists, communication experts, healthcare staff for participation.
- Financial: Training materials, facilitator fees, potential backfill costs for staff time. (Estimated: €10,000-€20,000)
- Technological: Online training platform, video conferencing tools, communication simulation software.

#### Expected outcomes and impact

- Improved communication skills among healthcare staff.
- Increased patient understanding of their health conditions and treatment plans.
- Stronger patient-provider relationships built on trust and empathy.
- Enhanced patient satisfaction with communication aspects of care.

#### Key performance indicators (KPIs)

- Percentage of staff completing the training program (Target: 70%+)
- Staff knowledge and skills improvement (measured through pre- and post-training assessments) (Target: 20% increase)
- Patient perception of staff communication (measured through surveys) (Target: 15% improvement)

### 6.3.3. Activity 3. Development of a guidelines to help design patient-friendly physical environments in healthcare facilities

#### Description

Creation of evidence-based guidelines to inform the design and renovation of healthcare facilities, with a focus on creating spaces that are welcoming, calming, and supportive of patient well-being. These guidelines will address aspects such as lighting, acoustics, color schemes, wayfinding, and accessibility. The guidelines will embed sustainability as a core design principle, emphasizing natural lighting, the use of recyclable or low-carbon building materials, efficient water usage, and layout designs that optimize energy efficiency and minimise material waste.



### Timeline and milestones

- Months 1-3: Conduct a literature review of evidence-based design principles and best practices for healthcare environments.
- Months 4-6: Gather input from patients, families, and healthcare staff on their preferences and needs for the physical environment.
- Months 7-9: Develop draft guidelines based on the research and feedback.
- Months 10-12: Pilot test the guidelines in selected healthcare facilities and refine based on the results.

### Resource requirements (human, financial, technological)

- Human: Interior designers, architects, healthcare professionals, patient representatives, researchers specializing in environmental psychology.
- Financial: Consulting fees for experts, printing and dissemination of guidelines, costs associated with pilot testing (Estimated: €20,000 - €40,000).
- Technological: Design software, survey platforms for gathering feedback.

### Expected outcomes and impact

- Increased awareness of the impact of the physical environment on patient well-being.
- Widespread adoption of patient-centred design principles in healthcare facilities.
- Improved patient satisfaction with the physical environment of care.
- Reduced stress and anxiety for patients and families during healthcare visits.

### Key performance indicators (KPIs)

- Reach of the guidelines (measured by the number of downloads, distributions, and citations) (Target: 50+ downloads within the first year).
- Adoption rate of the guidelines by healthcare facilities (Target: 5+ facilities adopting the guidelines within 3 years).
- Patient perception of the physical environment (measured through surveys) (Target: 15% improvement).

## 6.4. Activities to support the implementation of Priority 4. Strengthening international cooperation and exchange of experience

### 6.4.1. Activity 1. Host joint workshops and conferences

#### Description

Organising a series of international workshops and conferences focused on key healthcare challenges, bringing together professionals from various countries to share knowledge, best practices, and innovative solutions.

#### Timeline and milestones

- Months 1-3: Form organizing committee and identify key themes.
- Months 4-6: Secure venues and keynote speakers.
- Months 7-9: Open registration and finalize program.
- Months 10-12: Host inaugural conference and workshops.



### **Resource requirements (human, financial, technological)**

- Human: Event planners, subject matter experts, speakers, facilitators.
- Financial: Venue costs, travel expenses, marketing (Estimated €20,000 - €30,000 annually).
- Technological: Virtual conferencing platform, event management software.

### **Expected outcomes and impact**

- Enhanced knowledge sharing across international borders.
- Formation of new collaborative partnerships.
- Identification of innovative solutions to common healthcare challenges.
- Increased visibility of Health Labs4Value initiative.

### **Key performance indicators (KPIs)**

- Number of attendees (Target: 50+ for main conference).
- Diversity of countries represented (Target: 5+ countries).

## **6.4.2. Activity 2. Reverse innovation initiative**

### **Description**

Establishment of a program to actively identify and adapt healthcare solutions developed in low-resource settings that have the potential to address challenges in wealthier countries. This "reverse innovation" approach encourages learning from resource-constrained environments and applying those lessons to improve efficiency and affordability in developed healthcare systems.

### **Timeline and milestones**

- Months 1-6: Conduct a global scan to identify promising healthcare innovations from low-resource settings.
- Months 6-9: Evaluate selected innovations for adaptation potential.
- Months 10-22: Pilot test 1-2 adapted innovations in local healthcare facilities.
- Months 22-24: Analyze pilot results and plan for wider implementation.

### **Resource requirements (human, financial, technological)**

- Human: Innovation scouts, healthcare experts, cultural liaisons, implementation specialists.
- Financial: €50,000 - €100,000 for research, travel, pilot testing, and adaptation costs.
- Technological: Collaboration platform, data analysis tools, implementation tracking software.

### **Expected outcomes and impact**

- Reduced healthcare costs while maintaining or improving quality of care.
- Enhanced cross-cultural learning and global healthcare collaboration.

### **Key performance indicators (KPIs)**

- Identification of 5+ cost-effective healthcare solutions from low-resource settings.



- Successful adaptation and implementation of 1-2 innovations in local healthcare systems.

### 6.4.3. Activity 3. Establishment of a structured exchange program for healthcare professionals

#### Description

Creation of a comprehensive exchange program for healthcare professionals to spend 4 weeks in foreign healthcare institutions, gaining exposure to different healthcare systems, practices, and cultures while enhancing their clinical skills and international collaboration.

#### Timeline and milestones

- Months 1-3: Program design and partner institution selection.
- Months 4-6: Develop curriculum and logistics framework.
- Months 7-9: Recruit participants and host institutions.
- Months 10-12: Launch pilot program with initial cohort.
- Ongoing: Evaluate and refine program based on feedback.

#### Resource requirements (human, financial, technological)

- Human: Program coordinators, medical advisors, local liaisons at host institutions.
- Financial: Travel and accommodation stipends, administrative costs (Estimated: €20,000 - €30,000 annually).
- Technological: Online application portal, communication platform for participants.

#### Expected outcomes and impact

- Enhanced cultural competence among healthcare professionals.
- Improved understanding of diverse healthcare systems and practices.
- Strengthened international collaboration in healthcare.
- Personal and professional growth of participants.

#### Key performance indicators (KPIs)

- Number of participants completing the program annually (Target: 5+ in first year).
- Participant satisfaction rate (Target: 85%+ positive feedback).
- Number of collaborative projects initiated as a result of the exchange (Target: 2+ in 3 years).

## 7. Collaboration and partnerships

### 7.1. Identification of key stakeholders

#### Key Stakeholders:

- Healthcare providers: Hospitals, clinics, and medical professionals directly involved in patient care.



- Health technology companies: Firms developing innovative healthcare solutions and technologies.
- Government health agencies: National and regional bodies responsible for healthcare policy and regulation.
- Patient advocacy groups: Organizations representing patient interests and needs.
- Academic institutions: Universities and research centres contributing to healthcare research and education.
- SMEs in healthcare: Small and medium enterprises developing healthcare innovations.
- Healthcare facility managers: Professionals responsible for the operational aspects of healthcare institutions.

## 7.2. Roles and responsibilities

### Roles and Responsibilities:

- Healthcare providers: Implement innovations, participate in exchange programs, and provide feedback on patient satisfaction initiatives.
- Health technology companies: Develop and adapt innovative solutions, participate in testing spaces.
- Government health agencies: Provide regulatory guidance, support cross-border initiatives, and facilitate policy alignment.
- Patient advocacy groups: Offer insights on patient needs, participate in designing patient-friendly environments.
- Academic institutions: Conduct research, host workshops, and contribute to the exchange of knowledge.
- SMEs in healthcare: Showcase innovations at annual events, participate in testing and validation processes.
- Healthcare facility managers: Implement patient satisfaction initiatives and provide feedback on operational feasibility.

## 7.3. Mechanisms for collaboration

The cooperation will be led by representatives from TritonLife Group and CTRIA, serving as the main coordinators. The foundation of this collaboration is a formal cooperation agreement among the participating organizations, which clearly outlines roles, responsibilities, and expectations. A representative body, consisting of representatives from each participating organization, will be formed to guide the overall joint work. To effectively plan and implement specific tasks and projects, periodic working groups and project teams will be established as needed. Regular meetings, both virtual and in-person, will be scheduled to ensure continuous communication and alignment of goals. This structure aims to balance broad stakeholder involvement with efficient project management and execution. A collaboration platform or dedicated workspace will be set up to store and share documents, track progress, and facilitate discussions.

To further motivate stakeholders, shared objectives and key milestones will be openly discussed and agreed upon, highlighting the mutual benefits and positive impacts



achievable through joint action. Recognition of contributions and transparent decision-making will foster a sense of ownership and pride among participants. Additionally, incentives such as opportunities for professional development.

## 8. Risk assessment and mitigation strategies

Risk	Probability of occurrence	Mitigation strategy
Insufficient funding	High	Diversify funding sources by actively pursuing EU grants, private investments, and revenue-generating opportunities. Establish a clear funding roadmap with contingency plans.
Regulatory barriers	Medium	Engage early with regulatory bodies to understand requirements and streamline approval processes. Advocate for regulatory frameworks that support innovation while ensuring patient safety.
Lack of stakeholder engagement	Medium	Develop a comprehensive communication and outreach strategy to engage all stakeholders. Conduct regular meetings and feedback sessions to ensure alignment.
Data security and privacy concerns	Medium	Implement robust data protection measures and adhere to GDPR guidelines. Obtain informed consent from patients and healthcare providers regarding data usage.
Ineffective collaboration among key stakeholders.	Medium	Establish clear roles, responsibilities, and communication channels. Implement regular progress reviews and conflict resolution mechanisms. Foster a culture of open communication and shared goals.
Ineffective collaboration across borders	Medium	Establish clear communication channels and protocols for international partnerships. Develop cultural sensitivity training to address diverse values and goals.
Inadequate monitoring and evaluation	Medium	Develop a comprehensive monitoring and evaluation framework with clear KPIs. Conduct regular assessments and report findings to stakeholders.
Climate-related disruptions impacting healthcare infrastructure and operations.	Medium	Develop and implement climate resilience plans including infrastructure upgrades to withstand extreme weather events, ensure continuity of healthcare services, and integrate sustainability practices to reduce environmental impact. Regularly assess risks and update emergency response protocols accordingly.

## 9. Monitoring and evaluation framework

### 9.1. KPI tracking methodology

The KPI tracking methodology will employ a mixed-methods approach, combining quantitative data collection from existing healthcare databases and digital platforms with qualitative insights gathered through surveys, interviews, and focus groups. Data collection frequency will vary depending on the KPI, with some metrics tracked monthly (e.g., website traffic, participation rates) and others quarterly or annually (e.g., health outcomes, cost savings). Data will be analysed using statistical software and visualization tools to identify trends, patterns, and areas for improvement. Regular reports will be generated and shared with stakeholders to ensure transparency and inform decision-making.

### 9.2. Reporting mechanisms

The reporting mechanisms for this action plan will be multi-faceted and designed to ensure transparency, accountability, and continuous improvement. Quarterly progress reports will be submitted by project leads to the steering committee, detailing the status of activities, achievement of milestones, and any challenges encountered. These reports will include quantitative data on key performance indicators (KPIs) as well as qualitative assessments of progress towards strategic objectives. Annually, a comprehensive report will be compiled, summarizing the year's accomplishments, analysing overall impact, and identifying lessons learned. In addition, ad-hoc reports will be generated as needed to address specific issues or opportunities that arise during the implementation process. These reporting mechanisms will enable timely adjustments to the action plan and ensure that it remains aligned with its objectives.

The reports will be accepted by the steering committee, which consists of representatives from TritonLife Group, CTRIA, and other key stakeholders involved in the action plan. This committee will review the quarterly progress reports and annual comprehensive reports to assess the status of activities, evaluate performance against key performance indicators (KPIs), and provide feedback or recommendations for adjustments as necessary. Additionally, the steering committee will be responsible for disseminating the findings to all participating organizations and relevant stakeholders, ensuring that everyone is informed about the progress and impact of the initiatives outlined in the action plan.